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THE

Maryland Agricultural College

QUARTERLY

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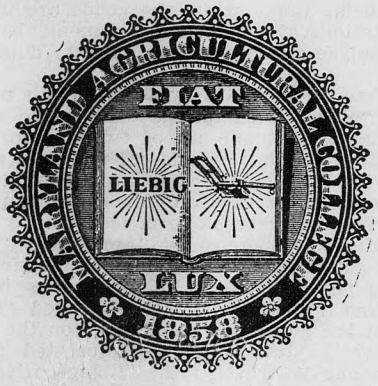
No. 67 FEBRUARY 1915.

FERTILIZER ANALYSES

H. J. PATTERSON, President

Edited by H. B. McDONNELL, State Chemist



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ADDRESS

Chemical Department, Maryland Agricultural College

COLLEGE PARK, MD.

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ANALYSES OF

Fertilizers Sold in Maryland

BY THE CHEMICAL DEPARTMENT OF

The Maryland Agricultural College

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The tables on the following pages are made up of the results of the analysis of fertilizers made at the College from August, 1914, to January, 1915, inclusive.

The majority of the samples analyzed are obtained by our sampling agents, the samples being taken while the goods are in transit, on vessels, wharves, cars or stations, from farmers' wagons, barns, etc. It is impossible for us to analyze all samples we collect; duplicates are generally omitted.

When a sample has been sent in by a farmer, his name, or initials, will be found after the "place of sampling." If "place of sampling" is not given, the sample has been made up of two or more samples taken at different places. Before sending samples of fertilizer for analysis, farmers should always send for blank forms and directions, stating the number of blanks wanted. One blank is required for each sample. No sample will be analyzed unless the proper blank form is used.

The figures in the columns headed "Ammonia," "Potash" and "Phosphoric Acid," are percentages, or pounds per hundred. To get pounds per ton multiply the per cent by 20. The columns headed "Found" contain the results found by analysis; those headed "Guaranteed" contain the essential parts of the guarantee as stamped on the bags.

The "Comparative Value Found" is calculated from the results of analysis as found in our laboratory: the "Comparative Value Guaranteed" is calculated from the manufacturers' guaranteed analysis as printed on the bags; in each case using the following schedule:

SCHEDULES FOR CALCULATING COMPARATIVE VALUES.

In Mixed Fertilizers:

For Nitrogen, calculated as Ammonia	20 cts. per pound
For Potash (K_2O), in forms free from muriate	6 cts. per pound
For Potash (K_2O), as muriate or kainit	5 cts. per pound
For Available Phosphoric Acid	6 cts. per pound
For Insoluble Phosphoric Acid	2 cts. per pound
For Insoluble Phosphoric Acid when from rock	1 ct. per pound

In Dissolved Rock:

Available Phosphoric Acid	4½ cts. per pound
Insoluble Phosphoric Acid	1 ct. per pound

In Tankage:

For Nitrogen, calculated as Ammonia	15 cts. per pound
For Phosphoric Acid	3 cts. per pound

In Ground Bone:

For Nitrogen, calculated as Ammonia..... 20 cts. per pound
For Phosphoric Acid ..... 3 cts. per pound

The "Comparative Values" given in the Table are not claimed to be the proper prices to be paid for the various fertilizers at the place of sale or use. They will be found to be not far from the prices for which fertilizers may be obtained at Baltimore, for cash, except that the figures for potash have not been revised since the beginning of the European war and should now be doubled to meet present conditions. That is, to the "Comparative Values" there should be added $1 for each percent of potash to get the proper comparative value per ton. The above schedule values potash (except as sulfate) at 5 cents per pound, which is $1 per "unit." A "unit" being 1% on the ton basis, which means the value of 20 lbs., as 1% of a ton is 20 lbs. The schedule will be revised for the next fertilizer bulletin. In making comparisons at other points freight from Baltimore should be added.

POTASH AT WAR PRICES! CAN THE FARMER AFFORD IT?

The European war has practically cut off our supply of potash, nearly all of which is imported from Germany, and the amount that has reached the United States since the beginning of the war has been so small as to be practically negligible. The situation seemed to be improving somewhat when, about February 1, the German Government prohibited further export, so that it is probable there will be no further imports during the war. At the present time muriate of potash costs at least $100 per ton and manufacturers can only use it in their mixtures in small quantity and at still increasing cost. Except in cases where the farmer has proved by experience that he cannot get a crop without it, we would advise putting this money into 16% phosphate, which is comparatively cheap. As a rule no farmer can afford to pay 10 cents, or more, per pound for potash for the ordinary farm crops.

Nitrate of soda, strange to say, has been cheapened on account of the war because the European market has been largely cut off, because nitrate, in addition to its use as a fertilizer, is one of the most important of war supplies, being used in the manufacture of explosives.

Nitrate of soda has some value in liberating potash from the soil, as well as its direct value for its nitrogen content.

The use of lime also assists in liberating potash from the soil.

The law requires that the bags containing the following fertilizers be plainly marked "Low Grade," in addition to the usual guarantee.

(a) Acid phosphate (dissolved rock) containing less than 14% of available phosphoric acid.

(b) Phosphate and potash with less than 2% of potash or with less than 12% of potash and available phosphoric acid combined. Thus a "10 & 2" fertilizer just escapes the "low grade" class.

(c) Any ammoniated fertilizer with less than 1% of ammonia, or its equivalent in nitrogen, or less than 1% of potash, if potash is claimed to be present, and less than 10% of ammonia, potash and available phosphoric acid combined. Thus a "1, 8 & 1" fertilizer just escapes the "low grade" class.

"Low grade" fertilizers are either made up with filler or by the use of poor materials. Even those not required to be marked "low grade" are not always free, by any means, as the minimum requirement to escape this class is rather low.

As a rule one can get more pounds of real fertilizer for a given amount of money in high-grade fertilizers than in low grade, hence the former are cheaper in the end.

Fertilizer should never be purchased without a guaranteed analysis.

Directions for mixing fertilizers at home on page 30.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
30092	**American Agricultural Chemical**	**Co., N. Y., N. Y.**										
30188	Bone & Potash Mixture	Baltimore	.....	.....	1.90	2.00	.65	.....	12.95	12.00	$13.69	$12.80
30268	Dead Shot Phos. (Low Grade)	Reisterstown	.58	.50	2.04	2.00	.75	.....	8.34	8.00	14.67	13.60
30199	Diamond State Crop Grower	Baltimore	.....	.....	1.90	2.00	.50	.....	12.87	12.00	13.58	12.80
30085	Dissolved Animal Bone	Baltimore	2.53	2.50	.....	.....	2.28	.....	12.56	12.00	26.10	24.40
30198	Dissolved Phos. & Potash,	Baltimore	.....	.....	1.80	2.00	.60	.....	9.80	8.00	10.74	9.20
30060	Fine Ground Bone	Baltimore	3.02	3.00	.....	.....	*24.07	*22.80	.....	.....	26.52	25.68
30174	Fish, Bone & Potash	Baltimore	1.95	2.00	1.92	3.00	1.35	.....	8.18	6.00	20.08	18.20
30276	Gold Seal Mixture	Baltimore	1.01	1.00	3.58	3.00	.95	.....	8.45	8.00	18.14	16.60
30_{247}	High Grade Ground Bone	Baltimore	4.73	4.00	.....	.....	*20.12	*20.59	.....	.....	30.99	28.35
	Pure Raw Bone	Baltimore	4.62	4.50	.....	.....	*20.58	*21.50	.....	.....	30.83	30.90
$3_{02}{}_{1}{}_{0}$	Special Mixture	Baltimore	2.20	2.00	2.96	3.00	1.50	.....	10.58	10.00	25.06	23.00
$3_{01}{}_{4}{}_{0}$	Super-Phosphate	Smithsburg	.....	.....	.....	.....	.13	.....	17.50	16.00	15.78	14.40
30_{168}	Tip Top Fertilizer	Baltimore	1.01	1.00	2.74	3.00	1.25	.....	8.33	8 00	17.28	16.60
30_{259}	Universal Crop Grower	Baltimore	1.01	1.00	2.72	3.00	.78	.....	9.45	9.00	18.41	17.80
	A. A. Co. Co., (Canton), Balto., Md.											
30070	Baker's Dissolved S. C. Phos	Baltimore	.....	.....	.....	.....	.60	.....	14.30	14.00	12.99	12.60
30021	Baker's Fish Guano	Baltimore	2.03	2.00	2.08	2.00	1.38	.....	8.47	8.00	20.91	19.60
30033	Baker'sSpec. Wht., Co'n&Gr. Mix	Baltimore	1.02	1.00	2.22	2.00	1.08	.....	9.80	9.00	18.49	16.80
30239	Baker's Standard H. G. Guano	Colora	2.61	2.50	3.28	3.00	1.18	.....	8.34	8.00	24.20	22.60
30260	Game Guano	Baltimore .....,	2.01	2.00	2.50	2.00	1.33	.....	8.36	8.00	21.10	19.60
30192	Harrow Brand Crop Grower	Maple Grove	1.08	1.00	1.14	1.00	.88	.....	8.97	8.00	16.57	14.60
30000	Soluble Phosphate & Potash	Baltimore	.....	.....	2.36	2.00	.45	.....	10.02	10.00	11.47	11.00

30189	Wheat, Corn & Grass	Reisterstown	1.01	1.00	1.70	2.00	1.45	.....	9.26	9.00	17.43	16.80
	A. A. C. Co., (Detrick), Balto., Md.											
30061	Ammoniated Bone Phosphate	Baltimore	1.52	1.50	2.08	2.00	1.15	.....	9.01	9.00	19.43	18.80
30132	Corn & Oats Fertilizer	Silver Springs	.97	1.00	2.42	3.00	1.00	.....	10.35	9.00	19.12	17.80
30319	Dissolved S. C. Phosphate	Baltimore	.....	.....	.....	.....	.75	.....	14.31	14.00	13.08	12.60
30071	Grain & Grass Compound	Baltimore	1.26	1.21	3.08	3.00	1.35	.....	9.03	9.00	19.50	18.64
30141	Imperial Compound	Middletown	.63	1.00	2.14	2.00	.73	.....	9.35	8.00	16.17	15.60
30190	Kangaroo Komplete Kompound	Parkton	2.03	2.00	2.92	3.00	.85	.....	8.78	8.00	21.92	20.60
30267	Phosphate & Potash Mix. 16 x 4	Baltimore	.....	.....	1.88	2.00	.58	.....	11.22	11.00	12.10	11.90
30261	Royal Crop Grower	Baltimore	1.83	2.00	1.94	2.00	.70	.....	7.78	8.00	18.88	19.60
30176	Soluble Phosphate & Potash	Baltimore	.....	.....	2.42	2.00	.48	.....	10.72	10.00	12.17	11.00
30248	Special Mixture	Baltimore	1.04	1.00	1.05	1.00	1.23	.....	8.51	8.00	15.91	14.60
	A. A. C. Co., (Dudley & Carpenter), Balto., Md.											
30213	Special Wheat Mixture	Baltimore	.....	.....	2.03	2.00	.80	.....	12.64	12.00	13.57	12.80
	A. A. C. Co., (Lazaretto), Balto., Md.											
30086	Ammoniated Phosphate	Baltimore	1.06	1.00	1.92	2.00	1.15	.....	9.45	8.00	17.96	15.60
30072	Crop Grower	Baltimore	1.93	2.00	2.12	2.00	1.20	.....	8.08	8.00	20.02	19.60
30177	Cyclo Guano	Baltimore	2.01	2.00	2.84	3.00	1.93	.....	7.52	8.00	20.67	20.60
30178	Dissolved Phosphate	Baltimore	.....	.....	.....	.....	.70	.....	14.08	14.00	12.81	12.60
30120	Dissolved Phosphate	Rockville	.....	.....	.....	.....	.30	.....	16.04	16.00	14.50	14.40
30087	Dissolved Phosphate & Potash	Baltimore	.....	.....	2.04	2.00	.43	.....	10.55	10.00	11.63	11.00
30242	Dissolved Phosphate & Potash	Betterton	.....	.....	2.02	2.00	.90	.....	12.66	12.00	13.59	12.80
30262	Excelsior A.A.A.(Low Grade)	Baltimore	1.04	1.00	1.28	1.00	1.05	.....	7.14	7.00	14.43	13.40
30121	Farmers Choice Brand	Rockville	1.08	1.00	1.82	2.00	1.28	.....	9.52	9.00	18.07	16.80
30088	H. G. Phosphate & Potash	Baltimore	.....	.....	2.30	2.00	.38	.....	11.42	12.00	12.66	12.80
30169	Special Ammoniated Compound	Baltimore	1.26	1.25	3.38	3.00	1.11	.....	9.02	9.00	19.68	18.80
30179	Special Mixture	Baltimore	2.26	2.25	3.50	3.00	2.55	4.50	10.38	9.00	26.02	24.60
30089	Wht., Corn & Grass Gr. (L. Gr.)	Baltimore	.68	.50	1.92	2.00	.53	.....	8.85	8.00	15.47	13.60
30108	Wheat & Grass Compound	Baltimore	1.04	1.00	3.52	3.00	1.28	.....	9.12	9.00	19.13	17.80
	A. A. A. Co., (Maryland,, Balto., Md.											
30315	Ammoniated Phosphate	Bel Air	1.95	2.00	3.38	3.00	1.00	.....	8.28	8.00	21.52	20.60
	A. A. C. Co., (Nickerson), Easton, Md.											
30078	Acid Phosphate	Baltimore	.....	.....	.....	.....	.70	.....	14.20	14.00	12.92	12.60
30093	Alkaline Bone & Phosphate	Baltimore	.....	.....	2.02	2.00	.60	.....	10.35	10 00	11.46	11.00
30280	Eastern Shore Domestic Guano	Quantico	1.83	2.00	3.26	3.00	1.05	.....	7.69	8.00	20 23	20.60
30253	Truck Guano	Baltimore	1.84	2.00	2.26	2.00	.98	.....	8.79	8.00	20.56	19.60

*Total Phosphoric Acid.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	A. A. C. Co., (Reese), Balto., Md.											
30254	Ammoniated Phosphate Mix....	Baltimore	1.04	1.00	3.12	3 00	1.35	.....	9.28	9.00	18.96	17.80
30277	Spec. Crown Phos & Potash....	Baltimore	.....	.....	2.05	2.00	.85	.....	12.33	12.00	13.32	12.80
	A. A. C. Co., (S. M. Shuler & Son), Liverpool, Pa.											
30263	Phosphate & Potash (L. Grade).	Baltimore	.....	.....	2.02	2.00	.68	.....	8.77	8.00	10.05	9.20
	A. A. C. Co., (Susquehanna), Balto., Md.											
30113	Alkaline Special.....	Baltimore	.....	.....	2.04	2.00	.90	.....	12 58	12.00	13.54	12.80
30194	Ammoniated Phosphate	Baltimore	1.93	2.00	2.64	2.00	1.28	.....	8.60	8.00	21.19	19.60
30193	Crop Grower (Low Grade).....	Baltimore	1.02	1.00	1.06	1.00	1.05	.....	7.38	7.00	14.42	13.40
30243	Soluble Bone & Potash.....	Baltimore	.....	.....	2.24	2.00	.53	.....	10.95	10.00	12.21	11.00
30014	Superior Rock Phosphate.....	Baltimore	.....	.....	.....	.....	.87	.....	14.18	14.00	12.93	12.60
30114	XXV Phosphate.....	Baltimore	1.01	1.00	1.08	1.00	1.65	.....	8.15	8.00	15.56	14.60
	A. A. C. Co., (Wheeler), Rutland, Vt.											
30116	Acid Phosphate.....	Pocomoke City.....	.....	.....	.....	.....	1.00	.....	14.18	14.00	12.96	12.60
30255	General Crop Grower.....	Baltimore	1.96	2.00	2.38	2.00	1.20	.....	8.52	8.00	20.92	19.60
30256	Royal Wheat Grower.....	Baltimore	1.06	1.00	1.76	2.00	1.37	.....	7.75	8.00	15.85	15.60
30257	Wheat & Clover Fertilizer.....	Baltimore	.....	.....	2.14	2.00	.58	.....	10.26	10.00	11.49	11.00
	A. A. C. Co., (Zell), Balto., Md.											
30274	Ammoniated Super-Phosphate..	Laurel	1.88	2.00	2.36	2.00	1.05	.....	8.31	8.00	20.27	19.60
30162	Dissolved Phosphate.....	Baltimore	.....	.....	.....	.....	.65	.....	14.15	14.00	12.87	12.60
30126	Economizer	New Windsor	1.16	1.00	2.02	2.00	1.10	.....	8.48	8.00	17.28	15.60
30244	Electric Phosphate.....	Baltimore	.....	.....	2.36	2.00	1.00	.....	10.52	10.00	12.03	11.00

30023	Hustler Phosphate	Baltimore	1.02	1.00	3.28	3.00	1.35	.....	9.03	9.00	18.74	17.80
30318	Little Treasure (Low Grade)	Laurel	1.02	1.00	1.18	1.00	1.10	.....	7.35	7.00	14.52	13.40
	Acme Guano Co., Balto., Md.											
30455	Harvest King	Glenwood (S.C.M.)	.95	1.00	6.94	6.50	.88	.....	10.20	10.00	23.33	22.50
30457	Spec. Ammoniated Mixture	Glenelg (W.J.C.)	1.08	1.00	5.96	6.00	.75	.....	6.56	6.00	18.45	17.20
	Alexandria Fertz. & Chemical Co., Alexandria Va.											
30154	Alkaline Phssphate	Potomac	.....	.....	1.80	2.00	.58	.....	10.20	10.00	11 10	11.00
30264	H. G. Acid Phosphate 16%	Baltimore	.....	.....	.....	.....	.23	.....	15.81	16.00	14 28	14.40
	American Fertilizing Co., Balto., Md.											
30200	Alkaline Super-Phos. (L. Grade)	Baltimore	.....	.....	2.08	2.00	1.13	.....	7 64	8.00	9 19	9.20
30331	Alkaline Super-Phos. (L. Grade)	Baltimore	.....	.....	1.88	2.00	1.40	.....	8.21	8.00	9.55	9.20
30201	American Eagle Crop Grower	Baltimore	1.93	2.00	2.04	2.00	1.83	.....	8.51	8.00	20.70	19.60
30094	Ammoniated Bone Compound	Baltimore	.87	1.00	2.30	2.00	1.98	1.00	7.77	8.00	15.89	16.00
30186	Ammoniated Bone Compound	Woolford	1.01	1.00	2.24	2.00	2.10	.....	8.45	8.00	17.26	15.60
30170	Bob White Emergency Comp	Baltimore	1.35	1.50	3.46	3.00	2.43	.....	8.85	9 00	20.45	19 80
30195	Champion Grain Grower	Baltimore	1.02	1.00	3.82	4.00	1.68	.....	9.25	8.00	19.67	17.60
30095	Dissolved Bone & Potash	Baltimore	.....	.....	2.34	2.00	1.40	.....	9.18	10.00	10 88	11.00
30001	Excelsior Guano	Baltimore	2.56	2.00	6.01	5 00	1.10	.....	6.55	8.00	24.55	22.60
30096	Fish & Bone Compound	Baltimore	2.02	2.00	3.46	3.00	2.10	.....	7.15	8.00	20.96	20.60
30333	Fish & Bone Compound	Baltimore	2.08	2.00	3.50	3.00	1.55	.....	7.34	8 00	21.25	20.60
30182	Formula Wheat & Corn	Baltimore	.....	.....	5.07	5.00	1 75	.....	9.85	10.00	14 29	14.00
30034	Grain & Grass Compound	Baltimore	1.42	1.00	3.40	3.00	1 80	.....	9 65	9.00	21.38	17.80
30097	High Grade Acid Phosphate	Baltimore	.....	.....	.....	.....	.33	.....	16 03	16.00	14.50	14.40
30102	Premium Phosphate & Potash	Baltimore	.....	.....	2.08	2.00	.90	.....	11.65	12.00	12.75	12.80
30002	Prize Truck Guano	Baltimore	1.89	2.00	10 42	10 00	1.82	.....	8.18	8.00	28.53	27.60
30035	Rescue Crop Guano	Baltimore	2.12	2.00	4.50	3.00	1.03	.....	8.88	10.00	24.05	23.00
30183	Soluble Alkaline Phosphate	Baltimore	.....	.....	5.12	5.00	1.23	.....	7.62	8.00	12.23	12.20
30332	Soluble Alkaline Phosphate	Baltimore	.....	.....	5.10	5.00	1.45	.....	7.55	8.00	12 19	12.20
30142	Spec. Compound Guano (Low Gr)	Motters	.56	.50	3.10	3.00	1.25	.....	7 25	7.00	14.54	13.40
30339	Victor Phosphate & Potash	.....	.....	.....	2.40	2.00	1.45	.....	14.79	14.00	16.00	14.60
	Armour Fertilizer Works, Balto., Md.											
30024	Acid Phosphate	Baltimore	.....	.....	.....	.....	1.23	.....	16.05	16.00	14.70	14 40
30049	Bone Meal	Baltimore	2.95	3.00	.....	.....	*23.20	*22.00	.....	.....	25.72	25.20
30222	Bone & Dis. Bone with Pot	Frederick	2.13	2.00	3.03	3.00	.75	.....	9.02	9.00	22.67	21 80
30098	Claude Parks Fearless (L. Grade)	Baltimore	.52	.50	1.64	2.00	.58	.....	8.32	8.00	13.93	13.60
30136	Claude Parks Hot Stuff	Chestertown	1.19	1.00	4.30	4.00	.60	.....	9 85	9.00	21.12	18.80
30099	Crop Grower	Baltimore	1.01	1.00	2.04	2.00	.80	.....	8.73	8.00	16.88	15.60

*Total Phosphoric Acid.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	Armour Fertilizer Works, Balto., Md.											
30053	Farmers Choice	Baltimore	1.02	1.00	2.96	3.00	1.03	.....	9.02	9.00	$18.27	$17.80
30474	Farmers Choice	Chestertown (J.C.S)	1.02	1.00	3 48	3.00	.75	.....	9.18	9.00	18.88	17.80
30454	Farmers Choice	Ridgely (J.N.M.)	1.06	1.00	2.94	3.00	.85	.....	8.88	9.00	18.18	17.80
30465	Farmers Choice	Kennedyville (S.C.S)	1.01	1.00	3.36	3.00	.58	.....	9.25	9.00	18.73	17.80
30003	Fruit & Root Crop Special	Baltimore	1.95	2.00	5.76	5.00	85	.....	8.02	8.00	23.52	22.60
30062	Grain Grower	Baltimore	1.81	2.00	2.06	2.00	.90	.....	7.66	8.00	18.85	19.60
30068	Phosphate & Potash	Baltimore	.....	.....	1.72	2 00	.82	.....	13.80	14.00	14 30	14.60
30015	Phosphate & Potash	Baltimore	.....	.....	4.80	5.00	.58	.....	11.67	12.00	15.42	15.80
30326	Phosphate & Potash	.....	.....	.....	2.04	2.00	.90	.....	11.90	12.00	12.93	12.80
30069	Phosphate & Potash No. 1	Baltimore	.....	.....	1.88	2.00	.63	.....	10 32	10.00	11 30	11.00
30340	Raw Bone Meal	Baltimore	4.40	4.50	.....	.....	*21 52	*21.50	.....	.....	30.51	30.90
30090	Royal Ammoniated	Baltimore	1.03	1.00	3.04	3.00	.78	.....	10.70	9.00	20.31	17.80
30452	Special Mixture	Mt. Airy (C.E.A.)	2.78	2.90	4.32	3 75	5.70	5.00	9.86	11.00	29.55	30.55
30100	Star Phosphate	Baltimore	.....	.....	.....	.....	.84	.....	14.09	14.00	12.85	12.60
30091	Wht., Corn & Oats (Low Gr.)	Baltimore	.94	1.00	1.06	1.00	.63	.....	7.12	7.00	13.61	13.40
30054	Wheat Grower	Baltimore	1.88	2.00	3.02	3.00	.93	.....	7.82	8.00	20.29	20.60
	Atlantic Fertilizer Company, Balto., Md.											
30127	Dissolved Phosphate	Woodbine	.....	.....	.....	.....	.33	.....	16.01	16.00	14.48	14.40
30217	Gold Medal Superior	Providence	2.13	2.00	2.86	3 00	.50	.....	8.36	8.00	21.61	20.60
30128	Phosphate & Potash	Woodbine	.....	.....	2.20	2 00	.28	.....	12.12	12.00	13.17	12.80
30064	Special Formula	Baltimore	1.02	1.00	3.02	3.00	1 30	.....	9.15	9.00	18.60	17.80

	C. A. Baile & Company, Medford, Md.											
30295	Bone Phosphate No. 3	Medford	1.28	1.25	3.06	2.00	1.10	.....	10.38	9.50	21.08	18.40
	Baltimore Fertilizer Company, Balto., Md.											
30191	Honest Acid Phosphate	Glyndon	.....	.....	.....	.....	.63	2.00	14.04	14.00	12.77	13 00
39171	Honest Acid Phosphate 16%	Baltimore	.....	.....	.....	.....	.45	1.00	16.11	16.00	14 59	14.60
30320	Honest Acid Phosphate 16%	Baltimore	.....	.....	.....	.....	.70	.....	15.71	16.00	14.28	14.40
30013	Honest Ammoniated Bone	Baltimore	2.06	2.00	2.56	2.00	1.73	.....	7.90	8.00	20.97	19.60
30258	Honest Bone Phos. (Low Grade)	Baltimore	.48	.25	1.26	1.00	1.18	.....	7.02	7.00	12.07	10.40
30163	Honest Bone & Potash	Baltimore	.....	.....	1.96	2.00	.90	.....	10.30	10.00	11.41	11.00
30172	Honest Crop Grower	Baltimore	1.01	1.00	1.50	1.00	.39	.....	8.26	8.00	15.61	14.60
30076	Honest Harvest	Baltimore	1.14	1.25	2.10	2.00	1.55	1.00	8.36	8.00	17.31	17.00
30325	Honest 1-7-3		1.40	1.00	3.30	3.00	.98	.....	7.23	7.00	17.97	15.40
30164	Honest Bone & Potash 10 & 2	Baltimore	.....	.....	1.92	2.00	.45	.....	10.55	10.00	11.51	11.00
30103	Honest Standard	Baltimore	1.43	1.25	3.20	3.00	1.83	.....	9.37	10.00	20.89	20.00
30324	Old Honesty (Low Grade)		.61	.50	2.36	2.00	1.55	.....	8 25	8.00	15 32	13.60
30473	Special Mixture	Owings Mills (W.R.)	3.11	3.00	1.94	3.00	1.88	.....	8.72	8.00	25.59	24.60
	Baltimore Pulverizing Company, Balto., Md.											
30232	Bone & Potash (Low Grade)	Baltimore	.....	.....	2.02	2.00	.63	1.00	7.95	8.00	9.31	9.40
30233	High Grade Wheat	Baltimore	2.01	2.00	2.38	2.00	.98	.....	8 26	8.00	20.72	19.60
30025	Pennimans Excelsior	Baltimore	.....	.....	1.88	2.60	.93	.....	11.77	10.00	12.66	11.60
30031	Peerless	Baltimore	.....	.....	5.04	5.00	.55	.....	6.85	7.00	11.32	11.30
30104	S. C. Phosphate	Baltimore	.....	.....	.....	.....	1.53	2.00	14.10	14.00	13.00	13.00
30105	Spec. Spring & Fall Mix. (L. Gr.)	Baltimore	.....	.....	2 30	2.00	.53	1.00	8.52	8.00	10.08	9.40
30214	Special Wheat & Grass	Baltimore	2.15	2.00	3.48	3.00	1.25	.....	7.39	8.00	21.45	20.60
	Baugh & Sons Company, Balto., Md.											
30012	Acid Phosphate 16%	Baltimore	.....	.....	.....	.....	2.08	.....	16.12	16.00	14.93	14.40
30471	Acid Phosphate 16%	Cecilton (E.N.C.)	.....	.....	.....	.....	.25	.....	17.20	16.00	15.53	14.40
30036	Amm'd. Sol Alk. (L. Grade)	Baltimore	.68	.50	2 18	2.00	1.60	.....	8.20	8.00	15 38	13.60
30037	Animal Base & Pot. Compound	Baltimore	2.06	2.00	2.38	2.00	1.88	.....	8.42	8.00	21 47	19.60
30026	Combination Animal Base Fert.	Baltimore	1.93	2.00	3.06	3.00	1.20	.....	11.18	10.00	24.68	23.00
30461	Combination Animal Base Fert.	Chester'n (W.M.S.)	1.79	2.00	3.25	3.00	1.78	.....	10 01	10.00	23.13	23.00
30464	Combination Animal Base Fert.	Chester'n (W.M.S.)	2.24	2.00	3.25	3 00	1.15	.....	10.12	10.00	24 81	23.00
30218	Complete Animal Base Fert.	Providence	2.10	2 00	5.28	5.00	1.03	.....	9.36	8.00	25.32	22.60
30129	Excelsior Guano	Woodbine	1 31	1.21	3 24	3.00	2.15	.....	8.28	8.00	19 28	17.44
30219	Export Bone with Potash	Rising Sun	2.56	2.00	2.42	2.00	*12 24	*11.00	.....	.....	20.00	16 60
30249	Fine Ground Bone	Baltimore	3.19	3.00	.....	.....	*15.62	*16.49	.....	.....	22 13	21.89
30265	Fish Mixture	Baltimore	2.04	2.00	2.10	2.00	2.25	.....	8.43	8.00	21.28	19.60

*Total Phosphoric Acid.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	Baugh & Sons Company, Balto., Md.											
30038	General Crop Grower	Baltimore	1.25	1.00	1.26	1.00	1.73	.....	8.55	8.00	$17.21	$14.60
30077	Grand Rapid H. G. Guano	Baltimore	3.28	3.00	3.68	3.00	1.90	.....	8.02	8.00	27.18	24.60
30322	High Grade Acid Phosphate	Baltimore	.....	.....	.....	.....	1.08	.....	16.14	14.00	14.75	12.60
30223	One Quarter Mixture	Williamsport	1.79	1.75	3.08	3.00	3.45	5.00	8.79	7.00	22.17	20.40
30016	Peninsula Grain Producer	Baltimore	1.21	1.00	3.62	3.00	1.35	.....	8.55	9.00	19 26	17.80
30463	Peninsula Grain Producer	Chester'n(W.M.S.).	1.13	1.00	3.59	3.00	1.20	.....	9.97	9.00	20.55	17.80
30459	Peninsula Grain Producer	Chester'n(W.M.S.).	1.16	1.00	3.79	3 00	1.43	.....	9.35	9.00	20.22	17.80
30019	Phosphate & Potash	Baltimore	.....	.....	2.20	2.00	1.48	.....	13.01	13.00	14.21	13.70
30460	Phosphate & Potash	Chester'n(W.M.S.).	.....	.....	2.89	2.00	1.13	.....	13.61	13.00	15.37	13.70
30138	Phosphate & Potash 12 & 5	Detour	.....	.....	5.14	5.00	.85	.....	13.43	12 00	17.40	15.80
30051	Pure Bone & Potash Mixture	Baltimore	3.02	3.00	3.48	3.00	*15.06	*15.00	.....	.....	24.60	24.00
30017	Pure Dissolved Animal Bone	Baltimore	2.88	2.50	.....	.....	1.83	.....	13.07	13.00	27.93	25.60
30334	Raw Bone Meal	.....	4.76	4.50	.....	.....	*21.58	*21.50	.....	.....	31.99	30.90
30122	Soluble Alkaline Super-Phos	Buck Lodge	.....	.....	2.36	2.00	1.05	.....	11.30	10.00	12.74	11.00
30039	Soluble Alkaline Super-Phos	Baltimore	.....	.....	2.20	2.00	1.75	.....	10.43	10.00	11.94	11.00
30040	Strawberry Mixture	Baltimore	3.17	3.00	5.88	5.00	1.90	.....	8.23	7.00	29.20	25.40
30234	Valley Special	Baltimore	1.14	1.25	3.34	3.00	1.73	.....	11.34	11.00	22.20	21.00
30027	Wheat Fertilizer	Baltimore	2.01	2.00	2.30	2.00	1.70	.....	8.43	8.00	21.14	19.60
	R. P. Beckley, Half Way, Md.											
30287	Bone Mixture	Half Way	1.57	1.50	.....	.....	1.48	.....	14.70	14.00	24.51	22.80
	N. T. Bennett, New Windsor, Md.											
30296	Butcher House Phosphate	New Windsor	1.02	1.00	3.42	3.00	.83	.....	10.60	9.00	20.55	17.80

30297	Soluble Wheat Grower	New Windsor	.89	1.00	2.40	2.00	.80		10.06	8.00	18.35	15.60
	Beck, Walker Company, Chesterto	**wn, Md.**										
30292	Good Drilling	Chestertown			3.30	3 00	.55		12.09	12.00	14.29	13.80
30291	Propagator	Chestertown	1.84	2.00	2.60	2 00	2.00		8.39	8.00	20 83	19.60
30293	Trustworthy	Chestertown	1.96	2.00	5.26	5.00	1.75		8 53	8.00	24.04	22.60
30294	Try Me Super-Phos. (Low Gr.)	Chestertown	.63	.50	3.56	3.00	1.43		9 25	9.00	17.75	15.80
	Berg Company, Philadelphia, Pa.											
30278	Standard Bone Manure	Fallston	2.27	3.64	7.08	6.00	3.05		8.50	8.00	27.58	30.16
	W. H. Bixler, Hagerstown, Md.											
30288	Bone Phosphate	Hagerstown	2.17	2.00	2.10	2.00	2.63		8.61	8.00	22.16	19.60
	Bowker Fetrilizer Company, Balto.,	**Md.**										
30143	Potash or Staple Phosphate	Motters	.94	1.00	3.20	3.00	.90		9.55	8.00	18.78	16.60
	Bryant Fertilizer Company, Alexan	**dria, Va.**										
30202	Acid Phosphate 16%	Baltimore					1.48		16 53	16.00	15.18	14.40
30155	Bone & Potash Mixture	Seneca			2.36	2.00	1.45		9.83	10.00	11.50	11.00
30157	Dissolved S. C. Bone	Seneca					.73		15.15	14.00	13.79	12.60
30158	Fine Pure Raw Bone	Seneca	4.32	4.50			*21.09	*20.60			29.93	30.36
30067	Fish Mixture	Baltimore	1.03	1.00	3.84	3.00	2.23		8.01	8.00	18.46	16.60
30203	H. G. Potash Mixture	Baltimore			3.96	4.00	1.88		10.39	10.00	13 69	13.00
30204	Potash Mixture 14 & 2	Baltimore			2.14	2.00	1.97		12.78	14 00	14.03	14.60
30215	Special Fish Mixture	Baltimore	1.02	1 00	3.67	4.00	1.40		8.56	8.00	18.58	17.60
	Herbert Bryant's Son, Alexandria,	**Va.**										
30159	Challenge Cropper	Seneca	1.09	1.25	2.02	2.00	.48		7.25	8.00	15.27	16.60
30123	Empress Ammoniated Dis. Bone	Washington Grove	1.02	1.00	1 36	1 00	.83		7 79	8.00	15.12	14.60
30124	Genuine Fish, Bone & Potash	Washington Grove	2.29	2.00	3.30	3.00	1.43		9.47	8.00	24.39	20.60
30125	Golden Grain Grower	Derwood	1.83	2.00	1.92	2.00	.93		8 60	9.00	19.93	20.80
30133	Old Reliable	Derwood	1 31	1.25	4.72	4.00	.90		8.78	8.00	20.86	18.60
30134	Peerless Formula	Brown's Station	1.62	2.00	2.12	2.00	.80		8 75	8.00	19.42	19.60
30135	Soluble Potash Mixture	Derwood			3.05	3.00	.43		12.17	12.00	14.09	13.80
30160	Spec. Animal Bone Mixture	Potomac	1.13	1.00	2.03	2.00	2.35		9.02	9.00	18.31	16.80
	C. C. Co., Thomas Fertz. Works,	**Hagerstown, Md.**										
30269	Atlas Keystone	Paramount	1.02	1.00	4.32	4.00	.85		8.25	8.00	18.64	17.60
30057	Commonwealth Phos. & Pot	Hancock			2.04	2.00	.50		9.64	10.00	10.82	11.00
30225	Dissolved Bone with Potash	Charlton	2.01	2.25	4 30	4.00	1.10		10.74	10.00	25.67	25.00
30323	Dissolved Phosphate	Paramount					.35		16.44	16.00	14.87	14.40

*Total Phosphoric Acid.

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							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	C. C. Co., Thomas Fertz. Works,	**Hagerstown, Md.**										
30226	Dominion Compound	Williamsport	1.83	2.00	4.08	4.00	1.22	.....	10.64	11.00	$24.66	$25.20
30145	Eastern Special	Smithsburg	.....	.....	4.28	4.00	.48	.....	10.17	10.00	13.53	13.00
30146	Eclipse Mixture	Paramount	.....	.....	2.74	3.00	.78	.....	12.75	12.00	14.38	13.80
30147	Empire	Paramount	2.06	2.00	8.08	10.00	.73	.....	8.70	8.00	27.05	27.60
30227	Excelsior Phoenix	Charlton	1.81	2.00	4.06	4.00	.35	.....	8.39	8.00	21.61	21.60
30148	Farmers Century Brand	Paramount	.92	1.00	2.36	2.00	.90	.....	7.78	8.00	15.74	15.60
30270	Farm Favorite	Paramount	1.06	1.00	3.98	2.00	.45	.....	8.16	9.00	18.19	16.80
30228	Fine Raw Bone	Keedysville	4.86	4.50	.....	.....	*20.32	*20.00	.....	.....	31 63	30.00
30149	Great Southern	Paramount	.....	.....	5.50	5.00	.45	.....	10.05	10.00	14.64	14.00
30058	Pioneer Majestic	Hancock	.....	.....	4.68	5.00	.40	.....	8 28	8.00	12 21	12.20
30059	Potash Special	Hancock	.....	.....	4.01	5.00	.60	.....	10.70	12.00	13.76	15.80
30150	Superior Planters Mixture	Paramount	.94	1.00	6.60	6.00	.90	.....	8.02	8.00	20.34	19.60
30229	Valley Bone Mixture	Williamsport	2.03	2.00	2.02	2.00	.87	.....	8.01	8 00	20.10	19.60
	Chesapeake Chemical Company, Ba	**lto., Md.**										
30275	Champion Fertilizer	Baltimore	2.06	1.25	2.16	2.00	1.07	.....	7.82	8.00	20.21	16.60
30250	Dissolved Phosphate 14%	Baltimore	.....	.....	.....	.....	1.35	.....	14.78	14.00	13.57	12.60
30205	Dissolved Phosphate 16%	Baltimore	.....	.....	.....	.....	.58	.....	16.37	16.00	14.85	14.40
30028	Farmers Favorite	Baltimore	1.01	1.00	4.02	4.00	2.50	.....	8.33	7.00	19.06	16.40
	Columbia Guano Company, Balto., Md.											
30216	Special Grange Formula	Baltimore	1.09	1.00	3.03	3.00	2.00	.....	9.71	9.00	19.84	17.80
	Josiah Cope & Company, Balto., Md.											
30110	Ammoniated Phosphate	Baltimore	.96	1.00	2.82	3.00	1.43	.....	8.32	8.00	17.21	16.60

30235	General Mixture	Baltimore	2.27	2.25	3.03	3.00	2.65	4.50	10.55	9.00	25.83	24.60
30079	Wheat & Grass Special	Baltimore	1.01	1.00	1.02	1.00	.50	.....	9.23	8.00	16.34	14.60
	L. E. P. Dennis & Son, Crisfield, Md.											
30312	Fish & Potash Mixture No. 1	Crisfield	2.82	3.00	5.40	5.00	1.65	.....	7.53	7.00	26.38	25.40
	Eastern Chemical Company, Hagerstown, Md.											
30271	Harvest King	Hagerstown	1.67	2.00	2.62	2.00	.85	.....	8.18	8.00	19.46	19.60
	Edelen Bros., Baltimore, Md.											
30065	Spec. Wheat & Grain Mixture	Baltimore	.87	1.00	2.36	2.00	1.78	.....	9.27	9.00	17.67	16.80
	Thos. W. Eliason, Chestertown, Md.											
30245	No. 1 Ammoniated Super-Phos.	Baltimore	1.14	1.50	2.56	2.00	1.28	.....	8.91	9.00	18.32	18.80
	John A. Englar, Linwood, Md.											
30298	Ammoniated Bone No. 1	Linwood	2.01	2.00	2.94	1.50	.95	.....	10.73	9.50	24.14	20.90
30299	Ammoniated Bone No. 2	Linwood	1.14	1.00	2.48	2.40	.63	.....	11.20	9.80	20.73	18.16
	Eureka Chemical Company, Balto., Md.											
30279	Dissolved Bone	Aberdeen	1.81	2.00	.....	.....	1.43	.50	11.72	11.00	21.87	21.40
30220	Farmers Favorite	Rising Sun	1.89	2.00	2.02	2.00	.50	.50	8.01	8.00	19.39	19.80
30221	Grain & Grass	Rising Sun	1.09	1.00	1.88	2.00	.63	.50	7.69	8.00	15.72	15.80
	W. S. Farmer & Company, Balto., Md.											
30206	B. & P. Phosphate	Baltimore	.....	.....	2.02	2.00	.50	.....	10.31	10.00	11.40	11.00
30165	Dissolved S. C. Phosphate	Baltimore	.....	.....	.....	.....	1.08	.....	14.42	14.00	13.20	12.60
30106	Harvest Queen	Baltimore	1.26	1.25	3.36	3.00	1.30	.....	9.38	9.00	20.18	18.80
30173	Pelican Guano (Low Grade)	Baltimore	.68	.50	3.11	3.00	.50	.....	6.63	6.00	13.99	12.20
30006	Potato & Tobacco Phosphate	Baltimore	2.01	2.00	8.64	10.00	1.07	.....	8.21	8.00	26.96	27.60
	Farmers' Fertilizer Company Union Bridge, Md.											
30300	No. 1 Bone Phosphate	Union Bridge	1.57	1.50	3.34	2.25	2.43	.....	9.73	8.00	22.27	17.85
30301	Union Bridge Favorite	Union Bridge	1.14	1.00	3.10	2.00	2.15	.....	8.18	8.00	18.34	15.60
	Farmers' Fertilizer & Feed Co., Westminster, Md.											
30302	No. 2 Bone Phosphate	Westminster	2.13	2.00	2.20	3.00	1.38	.....	9.70	9.00	22.91	21.80
30303	No. 3 Bone Phosphate	Westminster	1.54	1.00	3.22	3.00	1.08	.....	8.24	8.00	19.70	16.60
30304	High Grade Phosphate	Westminster	2.03	2.00	5.04	5.00	.58	.....	11.58	11.00	27.29	26.20
30139	XX Bone Phosphate	Tyrone	1.18	1.00	3.30	3.00	.90	1.00	9.55	9.00	19.84	18.20
	Farmers' & Planters' Company, Salisbury, Md.											
30336	Fish Mixture	Hebron	1.57	2.00	1.86	2.00	1.00	.....	9.25	8.00	19.64	19.60
30341	General Crop Grower	.....	1.22	1.00	2.12	2.00	.77	.....	10.15	10.00	19.49	18.00

*Total Phosphoric Acid.

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							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	Farmers' & Planters' Company, Sa	**lisbury, Md.**										
30283	High Grade Potash	Salisbury	.....	.....	1.96	3.00	.45	.....	11.79	12.00	$12.66	$13.80
30284	Peerless (Low Grade)	Newark	.36	.50	2.28	2.00	.68	.....	9.36	8.00	15.22	13.60
30118	Special Fish Mixture	Kings Creek	1.89	2.50	4.34	5.00	.80	.....	8.83	8.00	22.82	24.60
30285	Truckers Mixture	Salisbury	2.59	3.50	3.80	3.00	.70	.....	9.72	8.00	26.10	26.60
30286	Wheat & Grass Special	Salisbury	.94	1.00	4.22	3.00	.32	.....	8.53	10.00	18.35	19.00
	Farmers' Supply Company, Westm	**inster, Md.**										
30305	Parr Ridge (Low Grade)	Westminster	.56	.50	2.46	2.00	1.45	.....	8.59	8.00	15.59	13.60
30306	Standard	Westminster	1.42	1.00	3.26	3.00	1.17	.....	7.68	9.00	18.63	17.80
	Federal Chemical Company, Colum	**bia, Tenn.**										
30230	Daybr'k Tenn B'wn Phos & R'k	Williamsport	.....	.....	.....	.....	*27.83	*29.75	.....	.....	.....	.....
	Griffith & Boyd Company, Balto.,	**Md.**										
30321	Ammoniated Bone Phosphate	Charlton	1.81	2.00	2.22	2.00	1.85	.....	8.69	8.00	20.95	19.60
30151	Animal Bone with Potash	Chewsville	1.85	2.00	2.70	3.00	2.30	.....	9.02	9.00	21.84	21.80
30055	Bone Meal	Baltimore	3.55	4.00	.....	.....	*21.04	*22.00	.....	....	26.82	29.20
30240	Cereal Plant Food	Colora	1.14	1.00	2.22	2.00	2.55	.....	8.05	8.00	17.46	15.60
30472	Double Strength Grower	Owings Mills (W.R.)	2.64	3.00	3.74	3.00	1.18	.....	7.27	8.00	23.49	24.60
30056	Farmers Crop Grower	Baltimore	1.67	2.00	4.18	3.00	3.00	.....	6.13	6.50	19.42	18.80
30041	Fish, Bone & Potash	Baltimore	1.48	1.75	3.04	3.00	1.95	.....	7.38	7.00	18.60	18.40
30007	Gilt Edge Crop Guano	Baltimore	1.88	2.00	9.86	10.00	2.57	.....	8.03	8.00	28.05	27.60
30451	Gilt Edge Crop Guano	Forest Hill (J.W.C.)	1.77	2.00	9.22	10.00	2.71	1.00	8.02	8.00	27.00	28.00
30052	Harvest Queen Phosphate	Baltimore	.90	1.00	3.72	3.00	1.63	.....	9.31	9.00	19.14	17.80

30246	H. G. Acid Phosphate	Baltimore	.....	.....	.....	.....	.60	.....	14.29	14.00	12.98	12.60
30050	H. G. Acid Phosphate	Baltimore	.....	.....	.....	.....	.65	1.00	14.18	16.00	12.89	14.60
30008	Peerless Fertilizer (Low Grade)	Baltimore	.63	.50	2.44	2.00	3.12	.....	8.03	8.00	15 85	13.60
30115	Potato Guano 7%	Baltimore	7.12	7.00	2.72	3.00	.40	.....	5.66	6.00	38.15	38.20
30209	Pure Dissolved Animal Bone	Baltimore	2.66	2.50	.....	.....	1 98	.....	10.21	10.00	23.68	22.00
30082	Pure Fine Ground Bone Meal	Baltimore	3.79	4.00	.....	.....	*20.50	*22.00	.....	.....	27.46	29.20
30208	Special Gem Phos. (Low Grade)	Baltimore	.....	.....	1.82	2.00	1 88	.....	8.96	7.00	10.26	8.30
30238	Special Gem Phos. (Low Grade)	Baltimore	.....	.....	1.80	2.00	2.23	.....	9.31	7.00	10.63	8.30
30032	Special Grain Grower	Baltimore	.....	.....	2.20	2.00	2.97	.....	10 03	10.00	11.82	11.00
30119	Special Royal Guano	Rehobeth	1.02	1.00	3.03	3.00	2.85	.....	8.53	8.00	18.49	16.60
30042	Special Trucker	Baltimore	1.21	2.00	3.34	3.00	1.33	.....	7.42	8.00	17.61	20.60
30241	Truckers Stable Manure	Colora	3.07	3.50	3.04	3.00	2.25	.....	5 75	5.00	23.12	23.00
30166	Valley Fertilizer (Low Grade)	Baltimore	.63	.50	3.04	3.00	2.45	.....	8.01	8.00	16.15	14.60
30112	XX Potash Manure Special	Baltimore	.....	.....	2.44	2.00	.60	.....	14.10	14.00	15.25	14.60
	Griffith & Turner Company, Balto., Md.											
30313	Amm'd Alk. Plant Food (L. Gr.)	Baltimore	.73	1.00	2.40	1.50	2 70	.....	8.33	650	16.40	13.30
30251	Animal Bone Phosphate	Baltimore	1.91	2.50	2.46	1.50	1 75	.....	8.66	10.00	21.19	23.50
30317	Animal Bone Phosphate	Baltimore	1.91	2.50	2.20	1.50	2.23	.....	8.97	10.00	21.49	23.50
	Hampsteal Fertilizer Company, Hampstead, Md.											
30307	Acid Phosphate	Hampstead	.....	.....	.....	.....	.35	.....	17.23	16.00	15.58	14.40
30308	Grain & Grass Fertilizer	Hampstead	2.13	2.00	2.42	2.00	.93	.....	8 79	8.00	21.86	19.60
30309	Honesty	Hampstead	1.19	1.00	2 58	2.00	.75	.....	9 61	8.00	19.17	15 60
30310	Standard	Hampstead	1.47	1.25	4.02	3.00	.73	.....	11.26	10.00	23.70	20 00
	S. M. Hess & Bro., Phila., Pa.											
30210	Ammoniated Super-Phosphate	Baltimore	1.86	2.00	2 46	2.00	1.43	.....	8.48	8.00	20.65	19.60
30043	Farmers General Fertilizer	Baltimore	1.01	1.00	2.36	3.00	1.08	.....	7.85	8.00	16.25	16.60
30152	Fish & Potash Manure	Chewsville	1.93	2.00	2.92	3.00	1.50	.....	8.55	8.00	21.50	20.60
30044	Keystone Phosphate	Baltimore	1.02	1.00	1.38	1.00	.98	.....	8.42	8.00	15.95	14.60
30009	Potato & Truck Manure	Baltimore	2.30	3.00	6.16	6.00	.97	.....	8.96	8.00	26.50	27.60
30153	Soluble Phosphate	Chewsville	.....	.....	.....	.....	.85	.....	14.60	14.00	13.31	12.60
30211	Soluble Phosphate & Potash	Baltimore	.....	.....	2.10	2.00	.60	.....	10.14	10.00	11 35	11.00
30045	Wheat & Grass Manure	Baltimore	1.02	1.00	2.38	2.00	1.18	.....	8.02	8.00	16.55	15.60
	Home Fertzilier & Chemical Co., Balto., Md.											
30316	Universal Compound (L. Grade)	Baltimore	.....	.....	2.90	3.00	.88	.....	7.01	6.00	9.39	8.40
	W. H. Hood, Mt. Airy, Md.											
30311	Special Mixture	Mt. Airy	1.19	1.00	2.16	2.00	1.83	.....	9.25	9.00	18.75	16.80

*Total Phosphoric Acid.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	Horsey, Roe & Company, Greensbo	**ro, Md.**										
30289	1-8-2	Greensboro	1.19	1.00	2.48	2.00	1.30	.....	7.90	8.00	17.24	15.60
30290	13-2	Greensboro	.....	.....	3.08	2.00	1.42	.....	13.05	13.00	15.11	13.70
	Hubbard Fertilizer Company, Balto	**., Md.**										
30046	B. & P. 10 & 2	Baltimore	.....	.....	2.38	2.00	2.05	.....	10.48	10.00	12.22	11.00
30328	Climax Phosphate	Laurel	.89	1.00	2.56	3.00	1.13	.....	8.46	7.00	16.72	15.40
30111	Columbia Gem	Baltimore	1.16	.50	2.18	2.00	2.05	.....	9.43	8.00	18.96	13.60
30130	Farmers I. X. L.	Sykesville	2.03	2.00	2.34	2.00	1.53	.....	9.70	8.00	22.71	19.60
30010	Jersey Trucker	Baltimore	2.06	2.00	11.68	10.00	1.57	.....	8.43	8.00	30.67	27.60
30107	Oriental Phosphate	Baltimore	1.02	1.00	2.36	2.00	2.25	.....	9.43	8.00	18.66	15.60
30083	Phosphate 14%	Baltimore	.....	.....	.....	.....	1.50	.....	14.33	14.00	13.20	12.60
30066	Phosphate 16%	Baltimore	.....	.....	.....	.....	.33	.....	16.10	16.00	14.56	14.40
30185	Pure Bone Meal	Baltimore	4.52	4.50	.....	.....	*23.14	*22.50	.....	.....	31.96	31.50
30084	Standard Phosphate	Baltimore	2.25	2.00	3.02	3.00	1.48	.....	9.22	8.00	23.67	20.60
30327	Wheat & Rye Phosphate	.....	.....	.....	2.04	2.00	2.45	.....	10.80	12.00	12.25	12.80
30196	Wheat & Rye Phosphate	Baltimore	.....	.....	1.58	2.00	2.23	.....	12.02	12.00	12.85	12.80
	M. P. Hubbard & Company Inc.,	**Balto., Md.**										
30080	Celebrated Phosphate	Baltimore	2.06	2.00	2.44	2.00	1.53	.....	7.02	8.00	19.71	19.60
30167	Eclipse Guano	Baltimore	2.02	2.00	5.42	5.00	.48	.....	7.07	7.00	22.17	21.40
30456	Eclipse Guano	New Market(NHA)	2.02	2.00	4.96	5.00	.45	.....	7.28	7.00	21.96	21.40
30029	Excelsior Super Phosphate	Baltimore	1.02	1.00	2.72	2.00	.75	1.50	8.98	8.00	17.88	16.20
30266	Farmers Acme	Ellicott City	.85	1.00	4.42	4.00	.70	.....	8.74	8.00	18.59	17.60

30131	Harvest King Phosphate	Mt. Airy	.89	1.00	3.18	3 00	.95	.....	9.68	9.00	18.74	17.80
30187	Maloneys Special Wh't & Grass	Pocomoke City	2.04	2.00	4.94	5 00	1 08	.....	10.22	9.00	25 79	23.80
30161	Old Economy (Low Grade)	Brookeville	.53	.50	2.40	2.00	1.03	.....	8.62	8.00	15.27	13.60
30330	Soluble Phosphate & Potash	Baltimore	.....	.....	2.08	2.00	1.63	1.50	10.01	10 00	11.42	11.30
30252	Soluble S. C. Phosphate	Baltimore	.....	.....	.....	.....	.62	1.00	14.02	14.00	12.74	12.80
30018	Special Alkaline	Baltimore	.....	.....	5.28	5.00	.95	.....	8.63	8.00	13.28	12.20
	Lancaster Bone Fertilizer Compan	**y, Lancaster, Pa.**										
30758	Keystone Standard (Low Grade)	Hagerstown	.51	.35	2.16	2.00	.52	1.00	9.04	10.00	15.26	15.80
	Lister's Agricultural Chemical Wo	**rks, Newark, N. J.**										
30659	Bone Meal	Baltimore	4.42	3.25	.....	.....	*22.91	*22.88	.....	.....	31.43	26.73
30649	Buyers Choice Acid Phosphate	Baltimore	.....	.....	.....	.....	.95	.....	14.10	14.00	12.88	12 60
30519	Corn & Potato Fertilizer	Baltimore	1 91	2 00	3.20	3.00	.97	.....	8.26	8.00	21.14	20.60
30506	Dissolved Phosphate & Potash	Baltimore	.....	.....	2.02	2.00	.55	.....	10.53	10.00	11.61	11.00
30727	Golden Sheaf (Low Grade)	Baltimore	.58	.50	1.90	2.00	.78	.....	8.18	8.00	14.35	13.60
30500	Harvest Queen Phosphate	Baltimore	1.60	1.50	2.42	2.00	1 20	.....	9.55	9.00	20 76	18.80
30751	Raw Bone Meal	Baltimore	4.61	4.50	.....	.....	*21.33	*21.51	.....	.....	31.24	30.91
30747	Special Alkaline Fertilizer	Baltimore	.....	.....	2.22	2.00	.87	.....	11 75	12.00	12.97	12.80
30748	Spec. Crop Producer (L. Gr.)	Baltimore	1 03	1.00	1.04	1.00	.95	.....	7.66	7.00	14.73	13.40
30677	Special Wheat	Boring	1 96	2.00	3.12	3 00	.95	.....	8.98	8.00	22 12	20.60
30577	Stand. Pure Super-Phos. of Lime	Baltimore	2.87	3.00	2 36	2.00	1.45	.....	8.93	9.00	25.14	24.80
30660	U. S. Super-Phosphate	Baltimore	1.35	1.25	2.10	2.00	.98	.....	8.52	8.00	18.11	16.60
30650	Valley Brand Fertilizer	Baltimore	1 01	1.00	2.80	3.00	1 03	.....	8.32	8.00	17.23	16.60
30678	Wheat & Rye	Boring	2 05	2.00	2.02	2.00	1.20	.....	8.55	8.00	20.96	19.60
	D. B. Martin Company, Phila., Pa.											
30520	Acid Phosphate	Baltimore	.....	.....	.....	.....	1.75	.....	16.80	16.00	15.47	14.40
30558	Acid Phosphate	Cockeysville	.....	.....	.....	.....	.60	.....	14.68	14.00	13 33	12.60
30702	Bull Head Fertilizer	Leslie	2.80	3.00	2.88	3.00	1 65	.....	8 04	8.00	24 39	24.60
30703	Claremont Vegetable Grower	Leslie	2.95	3.00	4.02	5.00	1.70	.....	7.74	7.00	25.79	25.40
30559	Corn & Cereal Special	Cockeysville	2 58	2 00	1.72	2.00	2.45	.....	8.15	8.00	22.80	19.60
30583	Crop Producer	Baltimore	1.11	1.25	.....	.....	2.30	.....	10.95	10.00	18.50	17.00
30554	Dissolved Organic Compound	Baltimore	1.33	1.25	1.72	2.00	2 25	.....	9.80	9.00	19.70	17.80
30797	Dissolved Organic Compound	Baltimore	1.04	1.25	2.02	2 00	1.73	.....	9.02	9.00	17.69	17.80
30611	Extra Sure Grower	Sykesville	1.26	1.00	2.22	2.00	2.13	.....	8 87	8.00	18.75	15.60
30798	One, Eight & Four	Cockeysville	1.09	1.00	4.42	4.00	1.75	.....	7.53	8.00	18.52	17.60
30555	One, Eight & Four	Baltimore	1.14	1.00	3.82	4.00	2.15	.....	7.48	8.00	18.22	17.60
30560	Potash & Soluble Phosphate	Cockeysville	.....	.....	1.86	2.00	1.95	.....	11.25	10.00	12.38	11.00
31501	Potash & Soluble Phosphate	Baltimore	.....	.....	5.24	5.00	1 27	.....	11.75	12.00	16.07	15.80

*Total Phosphoric Acid.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	D. B. Martin Company, Phila., Pa.											
30595	Potash & Soluble Phosphate....	Baltimore.....	.....	.....	2.58	3.00	1.05	.....	11.90	12.00	$13.50	$13.80
30802	Potash & Soluble Phosphate....	Baltimore.....	.....	.....	2.36	3.00	.90	.....	12.38	12 00	13.68	13.80
30756	Pure Animal Bone & Pot. Comp.	Baltimore.....	2.10	2.00	3.10	2.50	*15.26	*16.00	.....	.....	20.76	20.10
30612	Pure Dissolved Animal Matter..	Sykesville.....	2.17	2.00	.....	.....	2.60	.....	11.87	12.00	23.96	22.40
30613	Pure Ground Bone.....	Sykesville.....	2.10	2.00	.....	.....	*22.43	*22.00	.....	.....	21.86	21.20
30606	Pure Raw Bone Meal.....	Gaithersburg.....	4.62	4 50	.....	.....	*23.30	*21.00	.....	.....	32.46	30.60
30561	Special Compound.....	Cockeysville.....	1.96	2.00	3.76	5.00	1.78	.....	7.62	8.00	21.45	22.60
30788	Special Compound.....	Graceham.....	1.96	2.00	3.16	3.00	2.73	.....	8.05	8.00	21.75	20.60
30632	Special Fertilizer(Low Grade)..	Graceham..... ...	.55	.50	1.50	2.00	1.70	.....	8.47	8 00	14.54	13.60
30651	Special Fertilizer.....	Baltimore.....	1.11	1.00	2.34	3.00	1.43	.....	9.20	9.00	18.39	17.80
30575	Special Potato Manure	Baltimore.....	1.01	1.00	4.38	3.00	2.23	.....	6.62	8.00	17.25	16.60
30718	Standard.....	Baltimore.....	2.10	2 00	2.78	3.00	2.55	.....	8.32	9.00	22.18	21.80
	F. Mehring, Keymar, Md.											
30759	Acid Phosphate.....	Walkersville.....	.....	.....	.....	.....	1.90	1.00	16.67	16.00	15.38	14·60
30711	Dissolved Raw Bone...	Williamsport	2.22	2.00	.....	.....	1.70	1.00	15.09	14.00	27.67	25.20
30709	Emmert's Half & Half.....	Williamsport	1.11	1.00	2.04	2.00	.98	1.00	14 64	13 00	24.44	22.00
30710	Potash & Phosphoric Acid.....	Williamsport	.....	.....	3.28	3.00	.73	.....	14.29	13.00	16.29	14.70
30783	Twenty Six Dollar Phosphate...	Keymar.....	1.79	1 75	3.22	3.00	2 53	1.00	11.86	11.00	25.62	23.60
30712	Wheat & Grass Producer.....	Williamsport	1.14	1.00	3.26	3.00	2.43	1.00	11.36	10.00	22.42	19.40
	Miller Fertilizer Company, Balto., Md.											
30752	Acid Phosphate...	Baltimore.....	.....	.....	.....	.....	.48	.50	14.95	14.00	13.56	12.70

30578	Ammoniated Dissolved Bone....	Baltimore.....	1.86	2.00	2.18	2.00	.90	.50	8.23	8.00	19.86	19.80
30633	Buyers Mixture(Low Grade)...	Graceham.....	.....	.....	1.74	2.00	.80	.....	7.40	7.00	8.56	8.30
30679	Clinch Phosphate.....	Glencoe	.....	.....	2.34	2.00	.98	.50	10.35	10.00	11.86	11.10
30634	Club Brand(Low Grade)..	Graceham.....	.56	.50	2.16	2.00	.48	.50	8.02	8.00	14.21	13.80
30562	Harvest Queen.....	Sparks.....	1.31	1.25	2.82	2.75	.90	.50	8.77	9.00	18.94	18.75
30680	Hustler Phosphate.....	Glencoe	1.01	1.00	1.22	1.00	.75	.50	8.02	8 00	15.18	14.80
30713	M. B. S.....	Keedysville.....	1.19	1.00	3.44	3.00	.48	.50	7.01	7.00	16.80	15.60
30507	Pimlico.....	Baltimore.....	2.15	2.00	10.06	10.00	.53	.50	8.03	8.00	28.51	27.80
30719	Potato & Vegetable Grower....	Baltimore.....	1.77	2.00	3.05	3.00	.70	.50	8 02	8.00	20 03	20.80
30502	Potato & Veg. Grower No. 1...	Baltimore.....	3.62	4.50	7.52	7.00	.60	.50	9 10	8.00	33.16	34 80
30556	Standard Phosphate.....	Baltimore.....	2.85	3 00	3.30	3.00	.50	.50	7.70	8.00	24.14	24.80
30799	Standard Phosphate.....	.....	2.66	3.00	3.03	3.00	.50	.....	8.39	8.00	23.94	.24 60
30563	W. G. Phosphate(L. Grade)....	Cockeysville.....	.55	.50	1.06	1.00	.65	.50	7.03	7.00	11.96	11.60
	Nassau Fertilizer Company, New York, N. Y.											
30698	Special Mixture.....	Baltimore.....	1.09	1.00	3.50	3.00	1.30	.....	10.03	10.00	20.42	19.00
	Natural Guano Company, Aurora, Ill.											
30567	Pulverized Sheep Manure.....	Baltimore.....	2.80	2.73	1.72	1.50	.15	.....	1.50	1.00	14.78	13.62
	V. W. Nicodemus, Monrovia, Md.											
30781	Sullivan's S. S. S	Monrovia.....	2.17	2.00	2.14	2.00	1.45	.....	9.02	9.00	22.22	20.80
	Nitrate Agencies Company, New York, N. Y.											
30589	Basic Slag, Thomas Phos. Po'der	Baltimore.....	.....	.....	.....	.....	1.75	.....	a14.90	a14.00	.....	.....
30753	H. G. Acid Phosphate.....	Baltimore.....	.....	.....	.....	.....	.38	.....	17.39	16.00	15.73	14.40
	G. Ober & Sons Company, Balto., Md.											
30757	Avondale Amm'd. Dis. Bone....	Baltimore.....	2.05	2.00	2.32	2.00	1.78	.....	8.63	8.00	21.59	19.60
30652	Dissolved Animal Bone.....	Baltimore.....	3.07	3.00	.....	.....	4.73	.....	12.65	10.00	29.35	24.00
30543	Dissolved Bone Phosphate.....	Baltimore.....	.....	.....	.....	.....	1.95	.....	14.28	14.00	13.24	12.60
30532	Dissolved Bone Phos. & Potash	Baltimore.....	.....	.....	2.03	2.00	1.13	.....	11.02	10.00	12.18	11.00
30813	Farmers Mixture.....	.....	1.16	1.00	2 38	2 00	1.45	.....	9.55	9.00	19.06	16.80
30800	Farmers Stand. Amm'd. Phos...	Baltimore.....	1.55	2.00	2.42	2.00	1.50	.....	10.09	9.00	21 33	20 80
30744	Fish & Potash Fertilizer.....	Baltimore.....	1.76	2.00	2.20	2.00	1.70	.....	9.94	9 00	21.85	20.80
30796	Harvest King Compound.....	.....	2.13	2.00	3.40	3.00	1.42	.....	10.88	9.00	25.55	21.80
30533	H. G. Acid Phosphate.....	Baltimore.....	.....	.....	.....	.....	.45	.....	16.03	16.00	14.52	14.40
30685	Independent Amm'd Super-Phos	Baltimore.....	1.16	1.00	.76	1.00	2.30	.....	8.86	8.00	16.95	14.60
30579	Ox Head Mixture(Low Grade)..	Baltimore.....	.52	.50	1.84	2.00	1.75	.....	9 23	8.00	15.70	13.60
30720	Raw Bone Meal.....	Baltimore.....	4.83	4.50	.....	.....	*23.17	*21.00	.....	.....	33.22	30.60
30763	Sol. Amm'd. Super-Phos.....	Baldwin.....	2.13	2.00	2.30	2.00	1.40	.....	8.58	8.00	21.68	19.60

*Total Phosphoric Acid. aWagner's Method.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	G. Ober & Sons Company, Balto., Md.											
30686	Special Plant Food	Baltimore	2.06	2.00	5.03	5.00	1.83	.....	10.20	9.00	26.24	23.80
30661	Standard Potash Compound	Baltimore	.....	.....	4.78	5.00	1.68	.....	12.46	12.00	16.33	15.80
30814	Superior Phosphate and Potash.	Baltimore	.....	.....	2.10	2.00	1.32	.....	12.02	12 00	13.18	12.80
[redacted]	**Patapsco Guano Company, Balto., Md.**											
30662	Baltimore Soluble Phosphate	Baltimore	.....	.....	2.22	2.00	.65	.....	11.63	11.00	12.82	11.90
30584	Blood, Bone & Potash (L Grade)	Baltimore	.67	.50	1.88	2.00	1.00	.....	8.50	8.00	15.16	13.60
30530	Coon Brand Guano	Baltimore	1.04	1.00	3.28	3.00	1.33	1.00	9.03	9.00	18.81	18.20
30673	Fish Guano	Choptank	2.04	2.00	2.02	2.00	.88	.....	6.92	6.00	18.83	17.20
30585	Grange Mixture	Baltimore	1.71	2.00	2.06	2.00	1.13	.....	9.47	8.00	20.71	19.60
30691	McKenney's Compound	Baltimore	2.13	2.00	3.24	3.00	2.03	.....	9.77	10.00	24.29	23.00
30669	Pure Dissolved S. C. Phosphate.	Baltimore	.....	.....	.....	.....	.68	.....	15.20	14.00	13.82	12.60
30586	Sea Gull Guano	Baltimore	.94	1.00	1.06	1.00	1.58	.....	8.05	8.00	15.11	14.60
30549	Soluble Phosphate and Potash	Baltimore	.....	.....	1.94	2.00	.50	.....	10.02	10.00	11.06	11.00
	Peerless Fertilizer Company, Chestertown, Md.											
30738	Pennington's Mixture (L. Grade)	Millington	.61	.50	2.62	3.00	.85	.....	9.83	8.00	17.20	14.60
	Piedmont-Mt. Airy Guano Company, Balto., Md.											
30714	Gowers' Bone Mixture	Williamsport	1.52	1.50	.....	.....	2.15	.....	14.26	14.00	24.05	22.80
30715	Gowers' Wheat & Clover Fert.	Williamsport	.92	1.00	3.44	4.00	1.18	.....	10.30	10.00	19.95	20.00
30580	Levering's Ammoniated Bone	Baltimore	1.01	1.00	2.84	3.00	1.48	.....	9.01	9.00	18.28	17.80

30811	Levering's Harvest Queen	Chestertown	.94	1.00	2.38	2.00	1.13		8.15	8.00	16.37	15.60
30534	Levering's Standard	Baltimore	1.57	2.00	3.48	3.00	1.30		8.22	8.00	20.14	20.60
30525	Peerless Phosphate	Baltimore	1.02	1.00	1.96	1.50	2.25	2.00	8.63	8.00	17.30	15.90
30810	Piedmont Acid Phosphate 14%	Baltimore					.35		14.48	14.00	13.10	12.60
30571	Piedmont Acid Phosphate 16%	Baltimore					1.43		16 26	16.00	14.92	14.40
30733	Piedmont Dissol'd Animal Bone	Baltimore	2.35	2.50			1.40		10.48	10.00	22.54	22.00
30581	Piedmont Economy (Low Grade)	Baltimore	.26	.25	2.03	2.00	1.23		10.37	10.00	16.00	15.00
30614	Piedmont Farmers' Favorite	Mt. Airy	1.06	1 00	3.02	4.00	1.18		8.27	8.00	17.65	17.60
30535	Piedmont Parmers' Potash Mixt	Baltimore			2.12	2.00	.88		9.32	10.00	10.69	11.00
30600	Piedmont Plow Brand	Princess Anne	1.52	2.00	3.92	2.00	1.15		8.30	8.00	20.42	19.60
30749	Piedmont Rock & Potash Mixt	Baltimore			1.90	2.00	.40		12.03	12.00	12.81	12.80
30734	Piedmont Spec. Phos. & Potash	Baltimore			2.02	2.00	.67		13.05	13.00	13.90	13.70
30531	Piedmont Special Potash Mixt	Baltimore			5.08	5.00	1.45		10.15	10.00	14.51	14.00
30615	Pied. Spec. Wheat & Grass Phos.	Mt. Airy	1 57	2 00	2.08	2.00	1.20	1.00	9.25	8.50	19.94	20.60
30616	Piedmont Stand. Dis. Bone Phos.	Mt. Airy	1.01	1.00	2.60	2 00	1.15	1.00	10.20	10.00	19.34	18.40
30617	Piedmont Succeeds (Low Grade)	Mt. Airy	.48	.25	4.48	3.00	1.00		7.95	9.00	16.34	14.80
	Pollock Fertilizer Company, Balto., Md.											
30048	Ammoniated Super-Phosphate	Baltimore	1.77	2.00	2.10	2.00	1.05		8.55	8.00	19.86	19.60
30073	Dissolved S. C. Phosphate	Baltimore					.49		14.09	14.00	12.78	12.60
30074	Fish, Bone and Potash	Baltimore	1.64	2.00	3.04	3.00	1.20		8.91	9.00	20.77	21.84
30231	H. G. Super-Phosphate	Baltimore					.88		16.13	16.00	14.70	14.40
30180	Owl Brand Guano (Low Grade)	Baltimore	.53	.50	1.64	1.50	.53		7.85	7.00	13.39	11.90
30181	Potash Mixture	Baltimore			2.04	2.00	.68		12.20	12.00	13.16	12.80
30030	Pure Raw Bone	Baltimore	4.59	4.50			*20.13	*21.51			30.44	30.91
30109	Soft Ground Bone	Baltimore	2.71	3.00			*13.76	*13.73			19.10	20.24
30329	Soluble Phosphate	Baltimore			1.96	2.00	.50		10.21	10.00	11.25	11.00
30075	Special Invigorator	Baltimore	.96	1.00	3.24	3 00	1.33		8.07	8.00	17.29	16.60
30022	Special Wheat & Corn Fertilizer	Baltimore	1.04	1.00	2.06	2.00	1.35		8.02	8.00	16.38	15.60
30101	Victor Brand Phos. (Low Grade)	Baltimore			1.32	1.00	.68		10.95	9.00	11.32	9.10
	Ramsburg Fertilizer Company, Frederick, Md.											
30626	Alkaline Phosphate	New Windsor			2.38	2.00	2.43		11.13	10.00	12.89	11.00
30607	Ammoniated Bone Phosphate	Buck Lodge	.94	1.00	2.44	2.00	2.85		10.13	10.00	19.50	18.00
30808	Excelsior Plant Food		1.67	2.00	2.52	2.00	3.45		9.59	9.00	22.09	20.80
30627	Half & Half	New Windsor	.75	1.00	1.10	1.00	2.28		12 22	10.00	19.67	17.00
30628	Old Virginia Compound	New Windsor	1.09	1.21	4.02	4.00	2.63		8.50	8.00	19.63	18.44
30629	Queen (Low Grade)	New Windsor	.53	.50	1.01	1.00	2.18		10.22	8.00	16.26	12.60

*Total Phosphoric Acid.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	Ramsburg Fertilizer Company, Fre	**derick, Md.**										
30803	Special Rock & Potash.....	Monrovia.....	.....	.....	5.70	5.00	2.13	.....	9.76	10.00	$14.91	$14.00
30682	Super-Phosphate	Mt. Airy.....	.....	.....	.....	.....	.85	.....	16.30	16.00	14.84	14.40
30635	William's Wheat & Grass Fert.	Monrovia.....	.87	1.00	2.44	2.00	2.40	.....	9.83	8.00	18.68	15.60
	Rasin-Monumental Company, Balt	**o., Md.**										
30636	**M. & C. Md. Alkaline Phos...	Walkersville.....	.....	.....	2.01	2.00	1.33	.....	8.87	10.00	10.26	11.00
30618	**M. & C. Maryland Plow Brand	Sykesville.....	1.21	1.00	2.28	2.00	2.00	.....	8.08	8.00	17.62	15.60
30637	Old Liberty Ammoniated Bone..	Walkersville	.89	1.00	4.28	4.00	2.35	.....	7.28	7.00	17.52	16.40
30621	Rasin's Acid Phosphate.....	Germantown	.....	.....	.....	.....	.97	.....	14.43	14.00	13.18	12.60
30638	Rasin's Acid Phosphate 16%....	Walkersville.....	.....	.....	.....	.....	.25	.....	16.84	16.00	15.21	14.40
30716	Rasin's Best Wht. & Grass Prod.	Big Pool.....	1.54	1.50	3.38	3.00	1.95	1.00	8.06	8.00	19.99	19.00
30587	Rasin's Bone & Potash Fert....	Baltimore	.....	.....	2.02	2.00	1.53	.....	9.47	10.00	10.85	11.00
30687	Rasin's Dissolved Bone.....	Baltimore	2.06	2.00	.....	.....	5.23	.....	9.27	10.00	21.45	20.00
30622	Rasin's Empire Guano.....	Gaithersburg.....	2.17	2.00	2.48	2.00	1.93	.....	8.13	8.00	21.69	19.60
30591	Rasin's Great Alk. Grain Gro ..	Baltimore.....	.....	.....	2.10	2.00	2.00	.....	13.94	14.00	15.05	14 60
30699	Rasin's Great Amm'd Crop Comp	Baltimore.....	.97	1.00	1 12	1.00	1.30	.....	13.49	12.00	21.71	19.40
30598	Rasin's H. G. Bone & Potash...	Baltimore.....	.....	.....	5.26	5.00	2.28	.....	11.39	12.00	15.97	15.80
30809	Rasin's H. G. Bone & Potash...	Baltimore.....	.....	.....	5.40	5.00	1.83	.....	11.30	12.00	15.94	15.80
30700	Rasin's Home Run Guano.....	Baltimore.....	2.04	2.00	3 56	3.00	1.62	.....	9.43	10.00	23.69	23.00
30536	Rasin's I. X. L. Fertilizer.....	Baltimore.....	1.40	1.00	3 01	3.00	1.68	.....	9.02	9.00	20.10	17.80
30557	Ras. Lit. Gi. Phos. & Pot. (L.G)	Baltimore.....	.....	.....	1.84	2.00	1.03	.....	8.45	8.00	9.66	9.20
30608	Rasin's Natural Crop Compound	Gaithersburg.....	1.14	1.00	4.38	4.00	2.05	.....	8.63	8.00	20.12	17.60
30624	Rasin's Peerless Bone & Pot....	Centreville	.....	.....	1.88	2.00	.93	.....	7.73	8.00	9.03	9.20

30521	Rasin's Royal Fish, Bone & Pot.	Baltimore	1.93	2.00	3.03	3.00	2.99	.....	7.92	8.00	21.44	20.60
30750	Rasin's Sea Wall Grain Grower.	Baltimore	1.01	1.00	1.02	1.00	.90	.....	10.77	10.00	18.34	17.00
30509	Rasin's Truckers Mixture	Baltimore	6.02	7.00	5.02	5.00	1.05	.....	6.88	6.00	37.78	40.20
30801	Rasin's Victoria Phos. & Pot.		.....	.....	1.84	2.00	1.13	.....	11.78	12.00	12.67	12.80
30692	Ras. Wht., Corn & O. Mix. (LG)	Baltimore	.46	.50	2.72	2.00	1.15	.....	7.63	8.00	14.18	13.60
30609	William Pen Crop Grower	Gaithersburg	1.19	1.00	1.30	1.00	1.48	.....	8.04	8.00	16.30	14.60
	Reindollar Company, Taneytown, Md.											
30784	Economy Fertilizer	Taneytown	1.13	1.00	2.22	3.00	1.30	.....	10.61	9.00	20.99	17.80
30785	Rock & Potash	Taneytown	.....	.....	2.68	2.00	.88	.....	12.29	12.00	13.92	12.80
	W. E. Robinson & Company, Bel Air, Md.											
30765	Vegetable & Grain Fertilizer	Fallston	2.01	2.00	2.44	2.00	.57	.....	8.23	8.00	20.59	19.60
	F. S. Royster Guano Company, Baltimore, Md.											
30646	Acid Phosphate 14%	Rockville	.....	.....	.....	.....	.75	.....	14.73	14.00	13.41	12.60
30550	Blue Ribbon Compound	Baltimore	.....	.....	1.82	2.00	.50	.....	13 53	12.00	14.10	12.80
30504	Bonanza Potato & Truck Guano	Baltimore	2.76	3.00	6.08	6.00	1.40	.....	6.25	6.00	25 18	25 20
30766	Dooley's Cardiff Mixture	Cardiff	2.03	2.00	3.20	3.00	1.78	.....	8.34	8.00	22.04	20.60
30767	Dooley's Spec. All Crop Mix	Cardiff	1.06	1.00	3.03	3.00	1.53	.....	9.34	9.00	19.09	17.80
30551	Fish, Flesh & Fowl	Baltimore	2.22	2.00	2.88	3.00	1.35	.....	8 25	8.00	22.40	20.60
30510	Gold Seal Potato & Cabbage Spec	Baltimore	2.08	2.00	10.28	10.00	1.73	.....	8.09	8.00	29.00	27.60
30625	Gold Seal Potato & Cabbage Spec	Chestertown	2.02	2.00	10.48	10.00	1.90	.....	8.48	8 00	29.50	27.60
30647	Harvest King Fertilizer	Rockville	1.91	2.00	2.50	2.00	1.60	.....	8 02	8.00	20.40	19.60
30537	H. G. Acid Phosphate 16%	Baltimore	.....	.....	.....	.....	1.20	.....	16.02	16.00	14.66	14.40
30596	Imperial Formula	Baltimore	1.43	1.00	4.16	4.00	1.70	.....	8.13	8.00	20.32	17.60
30582	Maloney's Spec. Wht. & Gr. Mix	Baltimore	2.10	2.00	5.40	5.00	2.30	.....	9.08	9·00	25.62	23.80
30544	Peerless Grain & Grass Grower.	Baltimore	.....	.....	2.08	2.00	1.45	.....	10.38	10.00	11.71	11.00
30597	Plow Brand Crop Grower	Baltimore	1.13	1.00	1.20	1.00	1.23	.....	8.02	8.00	15 83	14.60
30522	Pure Raw Bone Meal	Baltimore	4.68	4.50	.....	.....	*21.53	*21.50	.....	.....	31.64	30.90
30523	Seeding Down Special Fertilizer	Baltimore	1.08	1.00	3.32	3.00	1.40	.....	9.93	9.00	20.12	17.80
30511	Superior Potash Mixture	Baltimore	.....	.....	5.22	5.00	.68	.....	12.62	12.00	16.72	15.80
30512	Wht., Oats & Barley Fertilizer.	Baltimore	1.33	1.00	2.02	2.00	1.70	.....	8.25	8.00	17.92	15.60
	Scott Fertilizer Company, Elkton, Md.											
30704	Grain Special (Low Grade)	Rising Sun	.60	.50	3.96	3.00	.90	.....	8.19	8.00	16.55	14.60
30705	Pure Ground Bone	Rising Sun	4.27	4.00	.....	.....	*23.10	*21.50	.....	.....	30.94	28.80
30776	Soluble Phosphate & Potash	Iron Hill	.....	.....	3.14	3.00	1.25	.....	12.86	12.00	14 96	13.00
30706	Standard Phosphate	Rising Sun	.90	1.00	3.26	3.00	1.35	.....	9.06	8.00	18.31	16.60
30707	Sure Growth Super-Phosphate	North East	2.02	2.00	3.28	3.00	1.48	2.00	9.12	8.00	22·89	21.40
30777	Tip Top & Potash	Chesapeake City	.....	.....	2.18	2.00	.90	.....	11.61	10.00	12.81	11.00

*Total Phosphoric Acid. **Miller & Cramer, Woodsboro, Md.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	Scott Fertilizer Company, Elkton, Md.											
30314	Tip Top Soluble Phosphate	Elkton	.....	.....	.....	.....	.98	.....	16.03	14.00	$14.63	$12.60
30708	Wheat & Grass Gro. (Low Gr.)	Rising Sun	.51	.50	2.94	2.00	1.05	.....	8.15	8.00	15.18	13.60
	H. G. Snyder Company, Keedysville, Md.											
30762	Money Saver Phos. (Low Gr.)	Keedysville	.80	.75	3.36	5.00	2.03	.....	11.49	8.00	21.16	17.60
	Standard Guano Company, Balto., Md.											
30722	Extra H. G. Acid Phosphate	Baltimore	.....	.....	.....	.....	.88	.....	16.62	16.00	15.14	14.40
30760	Farmers Champion (Low Grade)	Walkersville	.60	.50	1.38	2.00	1.38	1.00	8.18	8.00	14.15	14.00
30688	Fish, Bone & Potash	Baltimore	1.04	1.00	3.03	3.00	1.82	.....	8.11	9.00	17.65	17.80
30648	Formula Great Grain Grower	Brookeville	1.02	1.00	2.82	4.00	1.83	1.25	9.01	8.00	18.44	18.10
30804	Golden Harvest	Baltimore	2.13	2.00	3.08	4.00	2.03	.....	9 11	9.00	23.34	22.80
30735	Ideal Guano	Childs	2.37	2.00	4.60	4.00	1.03	.....	10.24	9.00	26.78	22.80
30736	Mammoth Potato Grower	Childs	1.72	2.00	7.32	10.00	1.02	1.00	8 89	8.00	25.28	28.00
30546	Old Utility	Baltimore	1.83	2.00	2.88	3.00	1.38	.....	8.18	8.00	20.57	20.60
30723	Star Wheat Grower	Baltimore	2.05	2.00	2.08	2.00	2.42	1.00	7.91	8.00	20.74	20.00
30654	Truckers Joy	Baltimore	2.01	2.00	4.52	4.00	1.93	1.00	7.52	7.00	22.35	20.80
30466	XX Potash Mixture	Aireys (H. R.)	.....	.....	4.95	5.00	.95	.....	12.60	12.00	16.48	15.80
30467	XX Potash Mixture	Aireys (J. S. S.)	.....	.....	4.74	5.00	.88	.....	12.35	12.00	16.04	15.80
	W. H. Streett & Company, Fallston, Md.											
30528	Ammoniated Dissolved Bone	Baltimore	1.30	1.50	2.02	2.00	.68	1.50	9.57	9.00	18.97	19.40
	Superior Guano Company, Balto., Md.											
30728	M. B. W. Acid Phosphate 16%	Baltimore	.....	.....	.....	.....	.28	.....	17.03	16.00	15.39	14.40

30729	M. B. W. Amm'd. Bone & Pot..	Baltimore	1.14	1.00	2.02	2.00	2.40		9.27	8.00	18.66	15.60
30547	M. B. W. Caroline Special	Baltimore	1 11	1.00	3.84	3.00	1.95		8.60	9.00	19.38	17.80
30730	M. B. W. Cereal Grower (L. Gr.)	Baltimore	.53	.50	2.16	2.00	1.18		10.44	8.00	17.28	13.60
30552	M. B.W. Fruit Special	Baltimore	1 60	2.00	5.62	5.00	1.13		8.35	8.00	22.49	22.60
30538	M. B. W. Grain & Tomato Gro.	Baltimore	1.02	1.00	3.70	5.00	3.05		6.53	7.00	16.84	17.40
30592	M. B. W. Phosphate & Potash .	Baltimore			1.72	2.00	2.00		10.04	10.00	11.16	11.00
30670	M. B. W. Royal Crop Grower..	Baltimore	.90	1.00	4.04	4.00	1 88		7.65	8.00	17.57	17.60
30789	M. B. W. Spec. Bone Mix (L Gr.)	Centerville	.60	.50	3.40	3.00	2.07		8.34	9.00	16.64	15.80
30540	M. B. W. Sp. Corn & Grass (L.G)	Baltimore			3.24	3.00	1.08		8.16	6.00	10.80	8.40
80655	M. B. W. Special Mixture	Baltimore	.63	1.00	4 88	5.00	1.23		12.08	12.00	22.39	23.40
30731	M. B. W. Spec. Phos. & Potash.	Baltimore			2 01	2.00	.63		12.17	10.00	13.09	11.00
	Swift & Company, Baltimore, Md.											
30764	Champion Wheat&CornGrower	Baltimore	2.01	2.00	2.12	2.00	.80		12.22	12.00	25 14	24.40
30663	Corn, Wheat & Oats Fert	Baltimore	1.04	1.00	3.68	3.00	1.03		11.35	11.00	21.87	20.20
30594	Diamond-A-Fertilizer	Baltimore	2.22	3.00	3.30	3.00	.60		8.78	8.00	22.96	24.60
30693	Garden City Acid Phosphate..	Baltimore					.90		14.08	14.00	12.85	12.60
30529	Matchless	Baltimore	2.03	2.00	3.38	3.00	1.15		8.40	8.00	22.04	20.60
30573	Phosphate & Potash	Baltimore			2.02	2.00	.58		14.57	14.00	15.25	14.60
30694	Phosphate & Potash	Baltimore			2.02	2.00	.93		12.22	12.00	13.21	12.80
30737	Prolific (Low Grade)	Elkton	.53	.50	1.78	2.00	.75		8.29	8.00	14.15	13.60
30807	Raw Bone Meal	Forest Hill	4.69	4.50			*21.22	*23.00			31.49	31.80
30664	Red Steer	Baltimore	2.12	2.00	2.14	2.00	.98		8.30	8 00	20.97	19.60
30665	Special Formula	Baltimore	1.03	1.00	3.04	3.00	1.18		9.57	9.00	19.11	17.80
30724	Special H. G. Acid Phosphate.	Baltimore					.77		16.10	16.00	14.64	14.40
30657	Special Phosphate & Potash..	Baltimore			2.02	2.00	.50		10.35	10.00	11.44	11.00
60689	Virginia Grower Tobacco	Baltimore	3.40	3.00	3 10	3.00	.93		8.27	8.00	26.99	24.60
	H. S. Taveau & Company Balto., Md.											
30725	Bone Mixture	Baltimore	1.14	1.00	2.68	2.50	.78		10.27	10.00	19.87	18.50
30732	Florida Phosphate	Baltimore					.85		14.31	14.00	13.05	12.60
30754	Special Compound No. 2	Baltimore	1.02	1.00	2.02	2.00	1.28		8.30	8.00	16.57	15.60
30739	Wheat Mixture	Baltimore			2.48	2.00	.70		13.88	13.00	15.11	13.70
30666	Wheat & Grass Compound	Baltimore			2.04	2.00	.65		11.69	12.00	12.69	12.80
	Thomas & Company, Frederick Md.											
30610	Crop Grower	Boyd	1.19	1.00	1.42	1.00	1.93		8.18	8.00	16.77	14.60
30790	Crop Grower		1.13	1.00	1.24	1.00	1.58		8.05	8.00	16 25	14 60
30623	Walker's Mixture	Gaithersburg	1.11	1.00	1.64	1.60	.98		9.95	9.00	13.41	16.40

*Total Phosphoric Acid.

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	Wm. B. Tilghman Company, Salis	**bury, Md.**										
30770	Bone Tankage Mixture	Quantico	2.06	2.00	2.20	2.00	1.58	.....	8.08	8.00	$20.77	$19.60
30601	Fish, Bone & Potash	Berlin	1.01	1.00	2.40	2.00	1.03	.....	10.16	10.00	19.04	18.00
30771	H. G. Corn Fertilizer	Allen.	1.30	1.00	5.24	5.00	.40	.....	9.93	10.00	22 52	21.00
30602	H. G. Potato Fertilizer	Parsonsburg	2.87	3.00	6.20	6.00	.75	.....	7.75	6.00	27.28	25.20
30772	Mixture "B"	Hebron	3.58	4.00	4.06	4.00	.65	.....	8 47	7.00	28.80	28.40
30603	7% Fertilizer	Berlin	7.08	7.00	4.12	5.00	1.08	.....	6.15	6.00	40.25	40.20
30674	Special Mixture(Low Grade)	Riverton	.38	.33	2.12	2.00	.93	.....	11.55	12.00	17.87	17.72
30604	Standard Fish Mixture	Berlin	2.06	2.00	2.16	2.00	1 55	.....	8.23	8.00	20.90	19.60
	Tuscarora Fertilizer Company, Ba	**ltimore, Md.**										
30746	Phosphate & Potash	Baltimore	.....	.....	2.08	2.00	.53	.....	9.85	10.00	11.06	11.00
	J. E. Tygert Company, Phila, Pa.											
30590	Golden Harvest Phos. (Low Gr.)	Baltimore	.82	.50	2.20	2.00	1.23	.....	9 27	8.00	17.09	13.60
30667	Quaker Special Fertilizer	Baltimore	1.01	1.00	3.64	3.00	1 15	.....	8.35	8.00	18.16	16.60
30740	Soluble Phosphate & Potash	Baltimore	.....	.....	1.94	2 00	.50	.....	10.56	10.00	11.54	11 00
30658	Standard Fertilizer	Baltimore	1.88	2.00	2.14	2.00	.88	.....	8.52	8 00	20.23	19.60
	J. Tyson & Son, Frederick, Md.											
30779	Acid Phosphate	Frederick	.....	.....	.....	.....	.35	.....	16.29	16.00	14 73	14.40
30639	Ammoniated Super-Phosphate	Frederick	.87	1.00	3 70	3.00	.30	.....	8 60	8.00	17.62	16 60
30780	Half & Half Super-Phosphate	Frederick	.96	1.00	1.20	1.00	.53	.....	9.43	8 00	16.57	14.60
30640	Special Mixture(Low Grade)	Frederick	.67	.50	1 02	1.00	.53	.....	8.67	8.00	14.31	12 60
30717	XX High Grade Fertilizer	Frederick	1.91	2.00	2.40	3.00	.80	.....	10.06	8.00	22.43	20.60

	E. S. Valliant & Son, Church Hill, Md.											
30513	Amm'd. Potash Mix (Low Gr.)..	Baltimore	.29	.25	2.04	2.00	.68	.....	10.17	10.00	15.67	15.00
30514	Chesapeake Brand	Baltimore	.77	1.00	3.54	4.00	.60	.....	8.53	8.00	17.10	17.60
30515	Grain Grower (Low Grade).....	Baltimore	.46	.50	2 26	2.00	.48	1.00	8.70	8.00	14.73	14.00
30526	Ideal Fertilizer.....	Baltimore	1.06	1.00	2.22	2.00	.75	.....	8.80	9.00	17 32	16.80
30468	Ideal Fertilizer	Centerville.....	.87	1.00	1.06	2.00	.30	.....	9.68	9.00	16.28	16.80
30516	Maryland Brand.....	Baltimore	2.12	2 00	1.82	2.00	.43	.....	7.38	8.00	19.33	19 60
30469	Mixed to Order.....	Centreville.....	1.13	1.00	3.86	3.00	.38	.....	9 25	9.00	19.63	17.80
30599	½-9 & 3 (Low Grade).....	Baltimore	.52	.50	3.30	3 00	.70	.....	8.80	9.00	16.22	15.80
30517	Oriole Brand (Low Grade).....	Baltimore.....	.51	.50	3.16	3.00	.53	.....	8.57	8.00	15 69	14.60
30524	Standard Fertilizer.....	Baltimore.....	.82	1.00	4.98	4.00	.63	.....	9.05	9.00	19.37	18.80
30794	10-2.....	Secretary	.....	.....	2.02	2.00	.70	.....	9.37	10.00	10.59	11.00
30668	2-8-3.....	Baltimore.....	1.67	2.00	3 32	3 00	.53	.....	9.10	8.00	21.13	20.60
30812	2-9-3.....	.....	2.02	2.00	3.40	3.00	.80	.....	8.76	9.00	22.31	21.80
30505	Wheat & Grass Mixture.....	Baltimore	1.03	1 00	3.64	3.00	.86	.....	8.91	9.00	18 79	17.80
30475	Wheat & Grass Mixture.....	Chester'n (J.C.S.)..	1.09	1.00	2.90	3.00	.70	.....	9.02	9.00	18.36	17.80
	Virginia-Carolina Chemical Co., Richmond, Va.											
30641	Acid Phosphate 14%.....	Emmitsburg.....	.....	.....	.....	.....	.28	.....	15.57	14.00	14.07	12.60
30574	Acid Phosphate 16%.....	Baltimore	.....	.....	.....	.....	.25	.....	16 49	16.00	14.89	14.40
30741	Fish, Bone & Potash	Baltimore	1.96	2.00	3.50	3.00	1.27	.....	8.07	8.00	21.53	20.60
30642	Giant Alkaline Grain Grower...	Emmitsburg.....	.....	.....	2.04	2.00	1.97	.....	13.52	14.00	14.60	14.60
30695	High Grade Bone & Potash.....	Baltimore	.....	.....	5.20	5.00	1.42	.....	11.17	12.00	15.53	15.80
30643	1-9-3.....	Walkersville.....	.84	1.00	3.05	3.00	2.15	.....	9.03	9.00	18.11	17.80
30564	Peerless Bone & Potash (L. Gr.)	Hancock.....	.....	.....	2.02	2.00	1.50	.....	8.23	8.00	9.73	9.20
30787	Peerless Bone & Potash (L. Gr.)	Centerville.....	.....	.....	2.28	2.00	.93	.....	7.29	8.00	9.03	9.20
30644	Soluble Alkaline Compound.....	Emmitsburg.....	.....	.....	2.10	2.00	1 63	.....	11.74	12 00	13.00	12.80
30566	Special Bone & Potash.....	Hancock.....	.....	.....	5.22	5.00	1.55	.....	9.77	10.00	14.32	14.00
30565	Special Potash Mixture 8 & 5...	Hancock.....	.....	.....	5.06	5.00	1.25	.....	7.66	8.00	12.20	12.20
30696	Standard Bone & Potash.....	Baltimore	.....	.....	2.72	2.00	1.27	.....	9.78	10.00	11.77	11.00
30690	Standard Bone & Potash.....	Baltimore	.....	.....	2.04	2.00	1.25	.....	9.61	10.00	10.94	11.00
30645	Standard Crop Grower.....	Walkersville.....	2 32	2.00	2 48	2.00	1.77	.....	7.65	8.00	21.65	19.60
	S. L. Webster & Son, Cambridge, Md.											
30676	Crop King.....	Aireys.....	1 02	1.00	3 04	3.00	.83	.....	8.70	9.00	17.89	17.80
30671	Our No. 2.....	Baltimore	1.89	2 00	2.84	3.00	1.28	.....	7.20	7.00	19.55	19.40
	Westminster Fertilizer Co., Westminster, Md.											
30683	Big Gun.....	Lineboro.....	1.93	2.00	1.76	2.00	1.03	.....	10.57	10.00	22 57	22.00
30684	Governor.....	Lineboro.....	1.33	1.50	2.72	2.50	.98	.....	9.45	9.00	19.77	19.30

No.	Name and Address of Manufacturer and Name of Fertilizer	Place of Sampling (and Senders initials when not Sampled by the College Agent.)	NITROGEN Calculated as AMMONIA.		POTASH. K_2O.		PHOSPHORIC ACID.				Comparative Value Per Ton Found.	Comparative Value Per Ton Guaranteed.
							Insoluble.		Available.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
	Westminster Fertilizer Co., Westminster, Md.											
30630	Leader	Tyrone	1.01	1.00	1.58	1.50	1.08	.....	8.30	8.00	$16.01	$15.10
30631	Super-A	Tyrone	1.06	1.00	1.10	1.00	.83	.....	8.03	8.00	15.31	14.60
	H. W. Whistler, Bel Air, Md.											
30768	Crop Grower	Bel Air	1.95	1.50	1.30	2.00	1.98	.....	8.92	8.00	20.59	17.60
30769	Dissolved Bone	Bel Air	2.42	2.00	.....	.....	1 45	.....	12.26	12.00	24.97	22.40
	F. M. Wilson & Co., Pocomoke City, Md.											
30605	Favorite Truck	pocomoke City	2.70	3.00	6.82	7.00	1.15	.....	9.45	8.00	29.42	28.60
	Rob't. A. Wooldridge Company, Baltimore, Md.											
30761	Ammoniated Phosphate	Boonsboro	1.14	1.00	1.02	1.00	.95	.....	8.01	8.00	15.57	14.60
30672	Champion Stag Phosphate	**Baltimore**	1.13	1.00	1.98	2.00	1.63	.....	8.95	9.00	16.87	16.80
30742	Chieftain Phosphate	Baltimore	2.03	2.00	2.05	2.00	1.10	.....	8.26	8.00	20.64	19.60
30701	Dissolved S. C. Phosphate	Baltimore	.....	.....	.....	.....	.58	.....	13.32	12.00	12.11	10.80
30681	Double Quick Phosphate	Cockeysville	2 59	2.75	3.34	3.00	2.20	.....	9.80	9.00	26 34	24.80
30548	Farmers Fav. Cereal Comp (L. G)	Baltimore	.60	.50	2.06	2.00	.45	.....	7.83	7.00	14.04	12.40
30793	Florida Acid Phosphate	.....	.....	.....	.....	.....	.70	.....	15.19	14.00	13.81	12.60
30527	German Potash Mixture	Baltimore	.....	.....	2.04	2.00	.43	.....	10.10	10.00	11.22	11.00
30697	High Grade Acid Phosphate	Baltimore	.....	.....	.....	.....	.60	.....	16.19	16.00	14.69	14.40
30518	H. G. Dissolved Animal Bone	Baltimore	2.46	2.50	.....	.....	2 55	.....	12.18	12.00	25.48	24.40
30778	Liberty Bell Potash Mixture	Singerly	.....	.....	3.36	3.00	.38	.....	12.01	12.00	14.25	13 80
30806	Pure Raw Bone	.....	4.73	4.50	.....	.....	*21.74	*21.51	.....	.....	31.96	30 91
30588	Special Alkaline Mixture	Baltimore	.....	.....	2.02	2.00	.73	.....	12.90	12.00	13 78	12.80

30569	Spec, for Spring & Fall Crops..	Baltimore	1.31	1.50	2.52	3.00	1.23	.....	8.82	8.00	18.23	18.60
30743	Tuckahoe Bone Meal.....	Baltimore	3.12	3.00	.....	.....	*13.29	*13.73	.....	.....	20.45	20.24
	W. W. Woolston, Baltimore, Md.											
30458	Special Mixture	Laurel (S.F.H.).....	1.31	2.37	1.08	3.00	2.05	.....	5.14	10.60	13.31	25.20
	Worcester Fertilizer Company, Sno	**w Hill, Md.**										
30786	Bone & Potash	Snow Hill	.....	.....	1.68	2.00	1.38	.....	12.33	12.00	13.06	12.80
30773	Bumper Crop Grower.....	Snow Hill	2.15	2.00	1.92	2.00	1.30	.....	8.02	8.00	20.66	19.60
30774	Phosphate & Potash 12 & 2.....	Snow Hill	.....	.....	2.12	2.00	.80	.....	12.43	12.00	13.47	12.80
30775	Standard Phosphate.....	Snow Hill	1.08	1.00	4.12	3.00	1.25	.....	9.16	9.00	19 93	17.80
30476	Standard Phosphate.....	Girdletree (J.W.C.).	1.14	1.00	3.82	3.00	1.25	.....	10 02	9.00	20.90	17.80

*Total Phosphoric Acid.

MIXING FERTILIZER AT HOME.

Every consumer of fertilizers should so familiarize himself with fertilizer ingredients and calculations that he could be able to mix his own fertilizers if he so desires. He can buy the ingredients in quantity and compound them in different proportions to suit the needs of his various crops. It is a comparatively simple matter to mix a few ingredients and calculate from the formula the approximate analysis or to make up a formula to give a desired analysis. He should be able to calculate if he can mix his own fertilizer to advantage. If he can do so he can avoid buying useless filler, such as is used in making low-grade fertilizers and he can then tell at a glance at the analysis on a bag of mixed fertilizer, or at least after a very little calculation, if that fertilizer is liable to contain useless filler. By filler is meant sand, or other cheap ingredient having no fertilizing value that is added simply as a make-weight. A small amount of drier—say 20 or 30 lbs. of carbonate of lime to the ton—is sometimes used to advantage to combine with the excess of acid, thus putting the goods in better mechanical condition and preventing the early destruction of the bags. Organic materials of low grade, such as garbage tankage, when properly used as an ingredient, will also improve the mechanical condition of the goods and tend to prevent caking in the bags.

The prerequisites necessary are, first, the ingredients in proper mechanical condition, as it is not practicable to grind tankage, bones, etc., on the farm, or to use sulfuric acid in treating the same. Second, a clean floor in the barn or other place, a shovel or two, a sand screen such as is used to screen sand for making mortar, and, possibly, an old axe for breaking up hard lumps. A set of scales is desirable but may be dispensed with by making up the formula so that the ingredients may be used by the bag.

Suppose the formula calls for 1600 lbs. of dissolved rock, 16%, and 400 lbs. kainit, making a ton of 2000 lbs.

Proceed by emptying about half of the acid phosphate on the floor spreading in a uniform layer about six inches deep; spread the kainit on top of this, then the rest of the acid phosphate. Starting at one side shovel the pile over and then back again, and then put through the screen. The lumps should be broken up from time to time and not allowed to accumulate till the last.

There are several ways of calculating the analysis of the mixture but the best is probably to take the pounds of each ingredient in the formula as the numerator of a fraction with 2000 (the lbs. in a ton) as the denominator and multiply this by the analysis of that ingredient. Thus, $1600/2000 = 4/5$ and this times 16% (the percent of available phos. acid in the pure acid phosphate) gives 12.80 as the percent of available phos. acid in the mixture. Similarly the percent of potash is obtained by multiplying $400/2000$ ($=1/5$) by 12 (the percent of potash in the pure kainit) which gives 2.40%.

If the formula called for 1500 lbs. acid phosphate and 500 lbs. kainit the calculated analysis would be 12 and 3 percent (¾ of 16% and ¼ of 12%). It will be observed that the sum of the percents of available phos. acid and potash will always be somewhere between the analyses of the two ingredients, namely, more than 12% and less than 16% in this case. If the sum is not over 12% it indicates at once that filler is present.

If the phosphate and potash mixture is made up with muriate of potash instead of kainit one bag of 200 lbs. of the muriate, being one-tenth of a ton, will serve to furnish one-tenth of 50%, or 5% of actual potash in a ton mixture. If the other 1800 lbs., or nine-tenths are made up of 16% phosphate the percentage of available phos. acid in the mixture will be

9/10 of 16%=14.40%. In round numbers a "14 and 5" mixture. In this case the sum of the phos. acid and potash is over 16% but less than 50%.

On the other hand one should be able to calculate a formula to yield a given analysis. Even "before the war" we sometimes find phosphate and potash fertilizers with as low a guarantee as 8 and 1. What is the formula? Reversing the above method we find that to give 8% of available phos. acid will require 8/16 (equal to ½) of 2000 lbs. or 1000 lbs. of 16% phosphate, and, if kainit is used, which contains 12% of potash, it will require 1/12 of 2000 lbs. or 167 lbs. of kainit. This gives but 1167 lbs. of the ton and the balance must be made up of sand or other inert filler. If muriate is used instead of kainit it will require 1/50 of 2000 lbs. or 40 lbs. of muriate. In this case the rock and muriate give us but 1040 lbs. leaving 960 lbs. to be made up of filler—nearly one-half. Can any one afford to buy such a formula? Certainly to do so is a great waste of money and energy. The remedy? Buy a higher grade and not so many tons will be needed. There is always an abundance of sand in the field for filler. To pass to a more complicated or "complete" fertilizer we will consider the common "1-8-1" mixture. How can we make such a fertilizer? Under our law it is not required to be branded "low grade," tho it should be so branded. On the ton basis, to give 1% of potash, using kainit, it will require 1/12 of a ton, or 167 lbs.; 8% of available phos. acid from 16% phosphate will require 8/16 of 2000 lbs. or 1000 lbs; to give 1% of ammonia from low-grade garbage tankage containing 4% of ammonia will take ¼ of a ton, or 500 lbs. This only gives 1667 lbs., leaving the remaining 333 lbs. to be made up of filler. Certainly this formula is not to be recommended.

The "2-8-2" formula, also a very common one for general use, may be made up as follows: To give the 2% of potash will require 2/12 of a ton, or 333 lbs. of kainit; the 8% available phos. acid will require 8/16 of a ton of 16% acid phosphate, or 1000 lbs., which leaves 667 lbs. to furnish the material for 2% (equal to 40 lbs.) of ammonia. It will only require 2/7 of a ton of 7% tankage, or 571 lbs. to furnish the required ammonia, leaving 90 lbs. for filler. However, in practice at a factory either a lower grade of tankage would be used in part, or "base goods" would be used. The latter consists of a mixture of ground rock and some unavailable nitrogenous material, as hair, which has been dissolved by strong sulfuric acid thus making both the phosphoric acid and the ammonia available at the same time. The "base goods" will contain between 1 and 2% of ammonia and about 12% of available phos. acid. By using a part of this in the above formula the use of a filler is avoided.

When a formula with a still higher analysis is to be made up, of course higher-grade materials must be used. For example a high-grade fertilizer sometimes used for potatoes is a 5-9-10. Several formulas may be used to give approximately the same analysis. Using dissolved bone 2-14 (see table on page 32) we find that to give 9% of available phos. acid one must use 9/14 of a ton or 1286 lbs. This dissolved bone also contains 2% of ammonia and 1286/2000 of 2% is 1.28%. To give 10% potash will require 10/50 of a ton or 400 lbs. of murate of potash. This leaves 314 lbs. for sulfate of ammonia which will give 314/2000 of 25%, or 3.92% of ammonia. This added to the 1.28% from the dissolved bone gives a total ammonia of 5.20%, which is slightly above the required amount. However, when formulas are made up for the trade it is necessary to have a slight excess of each constituent or the fertilizer will be found short on analysis. When mixing for home use a slight variation is immaterial.

In practice it will generally be more convenient and easier to follow the calculations if a table is made about as follows:

INGREDIENTS AND ANALYSIS.	Ammon.	Av. Phos. Ac.	Potash
400 lbs. Muriate of Potash, 50%.....			10
1125 lbs. Acid Phosphate, 16%.....		9	
225 lbs. Nitrate of Soda, 18% Ammonia.....	2.02		
250 lbs. Sulfate of Ammonia, 25%.....	3.12		
2000	5.14	9	10%

(FOR SPRING CROPS.)

1700 lbs. Acid Phosphate, 16%.....		13.60	
200 lbs. Dried Fish Tankage, 11 and 8.....	1.10	.80	
100 lbs. Nitrate of Soda, 18%.....	.90		
2000	2.00	14.40	0%

TABLE OF STANDARD FERTILIZING MATERIALS WITH APPROXIMATE ANALYSES.

Should always be purchased under guarantee, as analyses will vary more or less.

	Nitrogen as Ammonia	Phos. Acid		Potash K_2O
		Available	Total	
Acid Phosphate or Dissolved Rock-H. Gr.	.....	16	.....	.....
" " " " "Old st'd	.....	14	.....	.....
Slag Phosphate–Basic Slag.....	.....	.....	18	.....
Dissolved Bone.....	2–3	12–14	.....	.....
Raw Bone.....	4–6	.....	20	.....
Steamed Bone.....	2–3	.....	24	.....
Phosphate Rock, Ground, (undissolved)..	.....	.....	30	.....
Sulfate of Ammonia.....	25	.....	.....	.....
Cyanamid.....	20	.....	.....	.....
Nitrate of Soda.....	18	.....	.....	.....
Dried Blood.....	12–14	.....	.....	.....
Tankage, Fish–Dried Fish Scrap.....	10–12	.....	8	.....
" , Slaughter House.....	7–10	.....	10–6	.....
" , Low-Grade, Garbage.....	3–4	.....	.....	.....
Cotton Seed Meal.....	7	.....	3	.....
Manure, Barnyard, mixed,.....	0.6	.....	0.35	0.5
" , Poultry, fresh.....	1.75	.....	0.7	0.6
Muriate of Potash.....	.....	.....	.....	50
Sulfate of Potash.....	.....	.....	.....	48
Kainit.....	.....	.....	.....	12

NOTE.—"Ammonia" is used here as it is the common practice of the fertilizer trade. To get the equivalent of nitrogen multiply the ammonia by 0.82.